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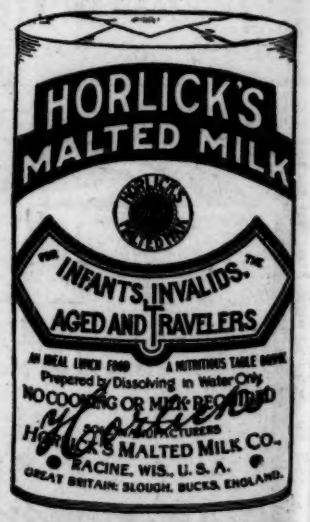

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General Scientific

IS RAPE ALWAYS A CRIME?

MAX HUHNER, M.D.,

CHIEF OF CLINIC, GENITOURINARY DEPARTMENT, MOUNT SINAI HOSPITAL DISPENSARY; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE; MEMBER, AMERICAN UROLOGICAL ASSOCIATION, AMERICAN MEDICAL ASSOCIATION, ETC.

New York.

Rape is defined as carnal knowledge of a female against her will. There are many interesting legal questions involved in the consideration of this offense, such as age of consent, consent obtained by fraud, absence of consent through fear of bodily harm, and the effect of narcotic drugs, etc. Concerning all these strictly legal aspects of the case, I have nothing to discuss. I leave them to the members of the legal profession to whom they properly belong.

There are several interesting medical aspects in the study of this crime, however, which should be taken into account by those who pass judgment upon the offender.

There are girls, for instance, and some who consider themselves strictly respectable, too, who have no hesitation in allowing a man, in many cases their sweetheart, to indulge in any sort of sexual play, but stop short only at intromission or sexual intercourse. They themselves are very often the agressors, and will inflame a man's sexual passion to the most intense point, will go past the most extreme bounds of propriety, will sometimes even give hints that sexual advances would not be resisted, but will stop short at the actual performance, or anything that might rob them of their virginity. They will, in some cases, place themselves in the posture to make sexual congress very easy for the male, but will, with *words*, deny their consent. It sometimes happens that the man's passion has been inflamed in this way beyond the point of control, or perhaps he thinks that she is only acting the part of Byron's heroine, who "saying she would not consent, consented," and allows his passion to get the better of him, going the one slight step further, which converts spooning into the criminal act. Legally he has committed rape, that is, he has had carnal knowledge against the will of the female, yet when we consider that no passionate married man would have been able to desist if his passion were sexually aroused by his wife in a similar manner, it must be admitted that scientifically and morally we can hardly consider the foregoing a case of rape, and we are almost tempted to say that the female got about what she deserved.

There is, however, another class of cases, which is just the reverse of the one just discussed.

An unscrupulous man takes out an unsuspecting girl, but one endowed with strong sexual passion, and treats her to supper and strong drinks. He does not get her intoxicated, she is still master of her consciousness, but unfortunately, with her strong inborn sexual passion, the liquor has the effect of so inflaming her sexual desire that she easily yields to his advances. Legally, the man has not committed rape; he has got the willing consent of a girl who was neither unconscious nor rendered stuporous. Scientifically, however, even if the crime does not come under the caption of rape, it is certainly about the same thing. He has, by a drug, so inflamed the passions of the female, that it is almost impossible for her to resist temptation. It is like dangling a tempting dish before a starving man, and then finding fault with him for attempting to obtain it.

In the above two instances I am discussing the subject purely from a medico-legal aspect, and have not entered into the moral question at all. Of course, no high-class mother would allow her daughter to go unchaperoned with a man, and drink with him. But that is not the subject under discussion here.

I have given the two examples just mentioned, to show the difference between the legal and the physiological aspect of the same act. I will now go into the pathology of rape, and take up the interesting question propounded in the title "Is Rape at all times a Crime?"

It must be stated at the outset that there are cases of rape, in fact, by far the greater number of cases, which are undoubtedly crimes and merit the most severe punishment. Under this heading come, for instance, the celebrated Boscheiter case, so prominent in the public papers several years ago, where several young men of good families started out with the deliberate intention of drugging a young girl with chloral and then violating her. Unfortunately for all concerned, they administered an overdose of the drug, and the poor girl died. They were all convicted and served prison terms.

There is no doubt in this and similar cases, where there is deliberate premeditation, that the rape committed is a crime so foul that should merit the most

severe punishment. With such cases the physician has nothing to do. They belong to the legal fraternity absolutely.

But there are cases, pathological cases from the medical standpoint, in which the advice of the medical expert should be sought, more often perhaps than at present, and in which we may well ask "Was the particular offense really a crime"?

There is a pathological condition in the male called satyriasis in which the individual afflicted has an almost insatiable desire for sexual intercourse. While it is true that in its most severe form the desire is so extreme as to amount practically to a mania, yet there are many mild forms of the condition which may afflict men of the highest respectability and of the very highest intellect. Such men are perfectly normal, but cannot resist indulging in sexual intercourse at the slightest provocation.

Krafft-Ebing, in his work on psychopathia sexualis, gives many examples of this condition, although the vast majority of the cases mentioned by him belong to the very severe type of the disease. Cases are on record in which married men compelled their wives to submit to their sexual embraces from 10 to 15 times in 24 hours. In some cases these periods of sexual excitement come on in attacks, while in the intervening intervals the patient is apparently normal. In other cases, however, the patient is in a continuous state of sexual erethism. One of the cases reported, for instance, was that of a respectable married man, in whom, if his wife was absent from home but a short time, the sexual impulse became so powerful that he had to satisfy it, irrespective of consequences.

The person so afflicted strives to obtain coitus at any price. If he cannot obtain it in the ordinary way, he may resort to masturbation, sodomy or rape. In such cases there exists an abnormal terrible desire or impulse to have sexual intercourse under any circumstances or conditions, irrespective of the age of the female or any of the considerations of decency or decorum. As White and Martin put it, "The sexual desire is so overpowering that its gratification becomes the one dominant thought and purpose of the patient's life." Thus Wulffen reports the case of an old man of 70 who married a young woman, with whom he had coitus between 10 and 20 times in 24 hours, and kept this up continually for a period of three months. Another case reported by Krafft-Ebing was that of a railway engineer, who suddenly left his train, ran into a small village, and raped a woman of 70 whom he saw standing at a window and who happened to be alone.

Several years ago I had under treatment a poor laborer, who spent all his wages to obtain connection, and who told me that he would indulge in coitus several times a day if he had the price. Every time he saw a female he would be seized with an inordinate desire, which he found it extremely difficult to restrain.

The entire psyche of these individuals is made up of sexuality, which colors their entire world. Their mind is full of obscene pictures, so that even the most sublime things they contemplate are tainted with lustful images and suggestions. If we look around among normal men we may often notice some slight tendency to this condition. We find, for instance, men and women also who never appreciate a joke unless there is something suggestive about it, and who manage to twist even the most sacred thoughts and sayings into something suggesting the sexual.

As regards the cause of this condition, there are many theories, none of which are perfectly satisfactory, or applicable to every case. A very ingenious theory is the atavistic one, suggested, I believe, for the first time by Krafft-Ebing.

In animals, during the rutting season, the sexual instinct is often so powerful as to dominate all other habits, and render them at this time insensible to dangers ordinarily guarded against.

As a result of centuries of education, civilized man has evolved a moral code for himself, which dictates that he satisfy his sexual needs within certain limits of modesty and morality, and not, like the brute, whenever the desire seizes him.

"Practically speaking," says Krafft-Ebing, "the sexual instinct never develops in the normal sane individual who has not been deprived by intoxication of his reason or senses, to such an extent that it dominates all his thoughts and feelings, to the exclusion of other aims in life, and tumultuously and in rut-like fashion demands gratification without allowing the possibility of moral and righteous counter-presentations, resolving itself into an impulsive, insatiable succession of sexual indulgences."

In satyriasis, according to this view, we have a reversion to primitive instincts. The individual becomes, for the time being at least, like an animal in the rutting season.

That there may be some truth in this atavistic theory is shown by the fact that among primitive peoples no restraint whatever is imposed on the sexual impulse; it is gratified without shame and without formality. No hindrance is offered to the mutual intercourse of the two sexes. Thus Lombroso comments upon the entire freedom in sexual relations among some tribes of savages, and mentions that "periods of great promiscuity occur at certain times, just as in the case of rutting animals, probably in the warm season of the year when fruit is plentiful." Cook, in connection with his first voyage, mentions that at Tahiti he saw the sexual act indulged in between the natives right in the court and in the presence of the queen. The sexual act, according to Cook, was the favorite topic of conversation between the sexes.

According to Herodotus many of the nations of antiquity did not keep the sexual relations private, but cohabited like animals in any assemblage.

Lombroso and Ferero, in their work "Woman as Criminal and Prostitute" state that in the lower stages of development the sense of modesty is entirely absent; unlimited freedom of sexual relation is the general rule.

It might be objected, however, that lack of modesty in sexual matters does not constitute satyriasis. But, on the other hand, we can easily understand that if such a primitive man were to be brought into contact with *modern* society it would be impossible for him to control his sexual appetite in the same way as does the civilized man of today, after centuries of education. It is more than likely that the former would indulge in coitus at every opportunity, whenever the desire seized him, and would be practically like one afflicted with satyriasis. In other words, were a man born today, with prehistoric or even primitive sexual instincts, and with that lack of self-control which is *normal* in primitive man, we would certainly consider him suffering from satyriasis.

In a court of law, as I understand it, when a person is on trial for rape, the main question, after the facts have been established, is, whether the man is sane or insane. If there is no doubt that the man is not insane, and it has been established that he has committed the act, he is punished, often very severely, sometimes even

with death, but generally with a long prison term. At any rate, little sympathy is spent on such an individual.

What I desire to bring out most emphatically here is the fact that the victim of satyriasis is *not* insane, either in the legal or medical sense of the term, except of course in some of those extreme cases reported by Krafft-Ebing, and even in such cases the question of insanity is to a large degree doubtful. Such unfortunates are not insane, and yet they have not the ability to restrain their desire in the presence of opportunity. They may be likened to opium fiends, who have been deprived for some time of their accustomed drug. It is well known that some of these opium habitués will go to almost any extreme to obtain the narcotic.

What shall be done with these unfortunate victims of satyriasis? Much has been tried in a medical way, but with very limited success. Some European authorities have reported cures in some cases by hypnotism. All cases are not alike. In some of them there seems to be an organic cause for the condition. It would take me too long to discuss here the anatomy and physiology of the male sexual organs. Briefly speaking, it may be stated that the verumontanum, which is situated in the prostatic urethra, has been called the sexual heart of the male, because in it is centered a large part of the sexual sense of the individual. Congestion and other pathological conditions of it, sometimes give rise to the most marked sexual disturbances, such as certain forms of impotence, pollutions, masturbation and various reflex neuroses combined under the general term of sexual neurasthenia. I do not wish to be understood that the entire sexual sense is situated here, or that every form of the disturbances above mentioned are due to pathological conditions of it, but merely, that in many cases, the conditions above mentioned are due to disturbances of this portion of the male anatomy, and a cure of the affected portion of this region will, in many cases, cure such disturbances. I have of course here given but the briefest outline description of the verumontanum.* Now in the particular case of satyriasis detailed at the beginning of this paper, I found upon examination the verumontanum greatly inflamed and enlarged, but by proper treatment I managed to reduce its size to its normal condition, as well as get rid of the inflammation, with the result of curing the patient's satyriasis. Cases have also been reported by other authorities in which the sexual sense suddenly reappeared in old men, long after the decline of sexual passion, but in a most perverted form, which came near sending them into the criminal courts. Here also, on examination, the same pathological condition of the verumontanum was discovered, and its removal or cure was followed by a disappearance of the pervert tendencies. Why a disease of the verumontanum should cause these serious symptoms in some cases, while in hundreds of other cases, even more serious pathological conditions of it are found without producing anything like such symptoms is one of the unsolved mysteries of sexual disorders.

Again, from a medical viewpoint, all such cases should be compelled to become total abstainers from liquor. The reason for this lies in the fact that it has been noted that there are very many mild cases of satyriasis, in which the patient under ordinary circumstances is quite able to control himself, but if drunk, is entirely unable to do so, and gets into serious trouble in consequence. The more severe cases should be placed in an institution, for the protection of society as well as for their own protection, and we ought not to wait until some unfortunate, uncontrollable impulse brings them into the criminal courts.

There is also a condition in the female, called nymphomania, which is the exact counterpart of satyriasis. In a few cases the experiment has been tried of having a nymphomaniac marry a man who is the victim of satyriasis. The result has been uniformly disastrous. Not only have the patients not been cured, but it was found that the children inherited the sum total of the degenerate qualities of both parents.

So much for the medical treatment. Now for the legal side of the question. Here there are two important points to be considered. First, society must be protected, and secondly in the real condition, these cases are not criminals, but the victim of severe disease. Hitherto, when a person has committed rape, and it has been demonstrated that he was not insane, little sympathy was wasted upon him, and even where he has not been lynched, he has received a lengthy prison sentence. For the real criminal this is certainly as it should be, but such punishment is not in accord with modern scientific principles as far as the victim of satyriasis is concerned. The tendency of modern criminology is more and more to look upon all crimes as disease. Many years ago, the insane were put in prison, and in many cases were treated by severe whipping, on the theory of casting out devils. Even in comparatively modern times, the insane were put in the so-called mad houses, and were not treated with nearly the humane treatment as at present.

In every case of rape, therefore, where insanity is pleaded, the criminal should not only be examined by an alienist, but also by a psychologist and sexologist, who should go into the history of the case from earliest chlidhood, to detect if possible any pervert tendency. In fact, this should be done in every case, whether the defendant sets up the plea of satyriasis or not, because many of these victims do not know, or do not believe that there is anything wrong with them.

To anticipate criticism of members of the bar, I might add that I fully appreciate the difficulties of such procedure, and the abuse which would probably result. It is likely that every person indicted for the crime of rape, and who has no other defense, would at once claim that he could not help it, and that he was seized with an uncontrollable desire to commit the act. But is that not equally true in cases pleading the defense of insanity? Do we not find insanity frequently given as an excuse to avoid the consequences of criminal acts, and has it not frequently occurred that experts could be found to prove the defendant insane? Still the law considers insanity a valid defense in many cases, and certainly would not think of abolishing the defense because of the abuse.

I would suggest just one thing further, however, and that is that in all cases where the defendant escapes punishment for his crime on the plea of satyriasis, he should not be let go scot free, but should be detained in a sanitarium, and kept under medical observation and treatment, until such time as experience would show that he can safely be allowed to return into society, which, as far as medical knowledge stands at present, means in many cases he will be so confined for the rest of his life. This procedure will have a two-fold effect. In the first place the family will be spared the odium of having a relative in prison as a criminal, and in the second place it will deter many who really are not diseased from setting up satyriasis as a defense, because they will have so little to gain thereby.

320 Central Park West.

*Those who are interested in the relationship of the verumontanum to the various forms of sexual neuroses, are referred to a work by the present writer entitled "A Practical Treatise on Disorders of the Sexual Function in the Male and Female," published by F. A. Davis Company, Philadelphia, Penna.

ARE THE AMERICANS BECOMING A NATION OF PSYCHOTICS?

I. L. NASCHER, M.D.,
New York.

Foreigners visiting America speak of our restless energy meaning our incessant physical activity. This excessive physical activity without compensating rest for recuperation causes physical breakdown of the nerves, producing neurasthenia, and of the organs, producing diseases of the heart and blood-vessels, dyspepsia and secondarily of the kidneys and brain. Of these, neurasthenia is the most frequent. Before complete nervous breakdown is reached the individual becomes nervous and irritable and if he is at all prudent he will let up on his work, but unless he stops completely he will continue to be nervous. In this condition he is a neurotic. He walks fast, although there be no occasion for haste, he eats fast, he reads fast, he pounds the typewriter fast, he is nervous and wants to do something all the time. He taps his feet in time to music and if it is slow music it irritates him because he cannot tap his feet fast enough. When neurasthenia sets in, all this is changed as he is physically unable to hurry. The nerves are tired and cannot respond as rapidly nor as forcibly as before.

A similar condition exists in brain activity but little known among physicians and virtually unknown among others. This mental breakdown is called psychasthenia and the sufferers are called psychopaths. But before complete mental breakdown occurs there is a mental condition corresponding to physical nervousness and as we have no name for this we can call those in this condition psychotics, corresponding to neurotics. They are not insane, though their views may be distorted. Just as the neurotic's nerves twitch, jump and must be doing something all the time, so the psychotic mind must be kept busy. If he writes, his thoughts run faster than his pen and he omits letters or words, or one word follows the other without stops or spaces. In calculation his figures come faster than he can combine them and he makes errors of calculation. When speaking of the present his mind is on the future, days, weeks or years ahead. He plans not for a day but for all time. He accomplishes things mentally just as the neurotic accomplishes things physically. But what the neurotic does accomplish is done so rapidly and is so far beyond the normal progress of more normal minds as to resemble rather the suddenly acquired enormous strength of the maniac than the gradually acquired strength of the athlete. The neurotic gets a distorted sense of physical activity. The work which caused his condition becomes more difficult than other work which may be physically harder and he will find it easier to chop down trees than to work the typewriter.

The psychotic has the same trouble in mental operations. He gets a distorted sense of space and distance. If he travels by boat from Pittsburgh to Cairo he will say it is five times as far as from New York to Chicago, because it takes about five times as long to make the trip. To this distorted sense of space we owe our skyscrapers, monstrosities in the eyes of more placid-minded foreigners, who recognize a sense of proportion, not only between the various dimensions of the buildings themselves, but between the buildings and their surroundings, their purpose and human beings. The placid-minded man, looking up from the street to the top of the Woolworth building, marvels at the size of the structure and if he reflects but a moment upon his own size he must stultify himself. The American, especially the city man, becomes accustomed to these inconsistencies, since they have grown gradually, but to the foreigner, accustomed to structures erected with a sense of proportion, these structures and the people bring to mind the proportion between the anthill and the ants. Just as the neurotic must walk fast and act fast, just as he is impelled to climb to the highest point, make the highest building, the largest dam, the longest bridge, so the psychotic mind works fast, and figures in thousands and millions when he should work slowly and figure in units and hundreds.

The psychotic gets a distorted sense of time and he labors for the immediate present or else for the dim and distant future instead of for the morrow and the day after. He wants to wipe out customs and institutions that have existed for centuries in a moment and by word of command; he figures that it a hundred men can build a ship in a year, a hundred times as many men ought to build it in one-hundredth part of the time; yet he builds a water supply for New York City for a population of 12,000,000 (allowing 100 days reserve), builds battleships that are antiquated before they are completed, postpones marriage until he is 30 or 40, imposing in the normal course of life a much earlier and longer widowhood upon his wife. The psychotic has a disordered sense of orientation. Slight changes in familiar surroundings disturb him and he cannot readily accommodate himself to new surroundings or to new situations.

This accounts for the mental confusion under such circumstances. He has a disordered aesthetic sense and unless he gets into a routine of following a single line or style, his work will show a rococo or bizarre appearance in which all the styles with which he is familiar are mingled. This is evident in our architecture and art. When following a new style or type he goes to extremes copying the latest schools, fads and ideas, and elaborating upon them.

The psychotic has a distorted moral sense, exhibiting at the same time ostentatious prudery and extreme licentiousness, seeking either fame or notoriety, denouncing crime and vice, yet secretly admiring the criminal and the vicious. This is well seen in the trend of literature and the drama where only the sensuous and the sensual are able to produce impressions sufficiently profound to overcome the complexity of ideas that are forever coursing through his brain.

Many cases that we call neurasthenia are really cases of psychasthenia, and most neurasthenias arise from and are associated with psychasthenia. Brain fag, headache or drowsiness following study or mental work, irritability of temper, arising during such work, forgetfulness, momentary mental confusion and absent-mindedness are symptoms of psychasthenia or the earlier stage as is found in the class we call psychotics. Neurasthenia and psychasthenia cause mental and physical deterioration and precocious senility.

Treatment. Slow up. Less work. Slower work. More sleep. More rational recreations.

POPULAR COOPERATION AND RESPONSIBILITY IN PUBLIC HEALTH WORK.

JOHN A. SMITH, M.D.,
SECRETARY OF THE NEW YORK STATE DEPARTMENT OF HEALTH.
Albany, N. Y.

The progress in knowledge of preventive medicine made during the past fifty years, and the application of that knowledge to the study of the health of mankind, has marked a most hopeful era in the recent history of our civilization.

Wherever this application has been made, positive and definite results have been obtained, and I would direct attention to the results accomplished last year in our department by such application. The general death rate was the lowest ever recorded. Likewise the death rates from the common communicable diseases, typhoid fever, scarlet fever, diphtheria and tuberculosis were the lowest since records have been kept in the State. A study of our vital statistics discloses the fact that during the past eight years, with our constantly decreasing death rate from typhoid fever, 547 lives have been saved, largely due to the improvement in the character of the water supplies throughout the State. Likewise in diphtheria, during the same eight-year period, 297 lives have been saved, due principally to the almost universal use of antitoxin in the treatment of that disease. Throughout the State communities have been enabled to make their water supplies, food supplies and drainage systems safe and to contend successfully with the common communicable diseases. The organization of our public health service in the State has been made thoroughly efficient within the past four years under the administration of Commissioner Biggs and our present efficient Public Health Council. Previous to the enactment of the various sections of the Sanitary Code, the enactment of sanitary regulations had been exercised by 1,438 local boards of health; consequently we had over fourteen hundred kinds of health regulations. In some instances communities were found where no sanitary code existed.

In the framing of the sanitary code the council aimed to secure for the citizens of the State all the advantages which science and experience, especially during the last quarter of a century, have offered in the prevention of disease and in the promotion of the common welfare, and with the least possible interference with the business, comfort and convenience of the people concerned.

It is not necessary to go back further than the poliomyelitis (infantile paralysis) epidemic of 1916 to realize the advantages of having uniform sanitary regulations. During this epidemic many towns and villages hurriedly, and without sufficient consideration, adopted health regulations, and some of these, as was to be expected, were unscientific and unworkable. Practically no two jurisdictions adopted the same rules and regulations. The result "was confusion in the law and in the enforcement thereof," which might have seriously endangered public health.

With the adoption by each board of health in the State of the uniform sanitary regulations we hope to secure intelligent cooperation between the local boards and the State Department, hitherto impossible to obtain.

It has been truly said, however, that "In all the complex machinery by which public health laws are enacted and administered that part is the most vital which comes in direct contact with the people themselves. Each year legislative bodies are constantly enacting wiser and better laws for the conservation of public health, and federal, state and municipal authorities are successfully working together to prevent the introduction of disease and to control its spread. All these forces may act in harmonious cooperation, but despite this the carelessness or incapacity of an untrained local health authority, however conscientious or zealous, may permit the outbreak of a preventable epidemic or the unnecessary spread of a disease which has established itself in the community.

"The health officer alone stands guard, and his single failure may lead to a loss of life, health and happiness, annul in large measures the most efficient work possible on the part of the other forces, and bring just reproach upon the greatest of conservation of efforts, the conservation of the public health. Fortunately this vital part of the public health machine has been well developed in most of our larger centers of population and in many of our smaller communities. In such sections we find experienced health officers maintaining efficient organizations supported by substantial appropriations and a sound public sentiment. However, this condition is far from universal. In many of the larger municipalities of our State, including those which justly lay claim to great prosperity and enlightenment, matters of local health administration have been sadly neglected, or only nominally cared for." [1]

In many sections of this State the board of health, consisting of the town board, meets but once a year. Despite our great advances in the knowledge of combating communicable diseases, which at the present time requires years of special training to acquire; despite the great amount of publicity and general public interest given to everything pertaining to the public health, to the cause and treatment of epidemics, to the successful care and protection of milk, water and food supplies, and the general sanitary conditions and surroundings of a community; despite all these facts, a vast majority of our smaller towns, and I regret to say, our smaller cities, still entrust their public health administration to boards of local business men. In the case of cities only, is a medical practitioner included, the health officer being a physician usually busily engaged in private practice.

The members of these local boards of health may be and usually are, conscientious, diligent and well meaning in the performance of their duties, but they are absolutely incapable of performing public health functions which require the fullest abilities of the trained specialist. As has been said "they bear about the same relation to a modern health organization that the old volunteer force with its hand-pump bears to an up-to-date and fully equipped fire department."

Instances almost without end might be cited, not merely of preventable disease, but of preventable epidemics in which life and health have been sacrificed because the people themselves thought that they could not afford to pay for a health officer as much as they would pay for a fire or police chief. It is most difficult to convince the people that the functions of the health officer are not unlike those of the other two.

The work of the modern health officer is preventive. The trained health officer knows that all epidemics start in just certain ways and that the time for his greatest activities is not *during* the epidemic but *before it begins.* The health officer diagnoses public ills and prescribes treatment with the community as his patient. The health board represents the public in accepting or rejecting his diagnosis and treatment. The private physician frequently is unable to convince a patient of impending disease. Likewise a health officer often has difficulty in convincing the public of threatening dangers to the public health. Health boards are the guardians of public health in the same sense that parents are guardians of the health of their children. They are willing to consult experts when a serious epidemic breaks out, but they are not willing to undertake preventive work when no immediate and evident danger is in sight. The trained health officer sees danger far off but because it is not right at hand, the Board of Health is likely to ignore the warning

[1] Cooperative Public Health Administration by Earl B. Phelps, U. S. Public Health Service.

and to consider preventive measures to be infringements on private privilege and personal liberty. The average American community expects to offer up a sacrificial toll of human lives and suffering before its God of personal independence is appeased and the public awakens to the duty of preventing disease while the task is still small.

Enough has been said to demonstrate the vital importance of the local health officer, that part of the health machinery which finally administers to the people. Nevertheless it appears that, despite the best intentions of the citizens of small towns, financial difficulties have arisen which have, until recently, precluded the organization of competent health departments. These difficulties have been removed by the consolidation of several small towns into one well-administered health department with a qualified health officer in charge who receives an adequate compensation. Each of the towns or towns and villages so consolidated contributes its share to the amount required for the maintenance of the efficient health district, whereas formerly each of the municipalities affected was taken care of by a health officer who devoted only a part of his time to the municipal service, in some cases receiving as little as $10 a year. Naturally the activities of such men were very perfunctory.

In this connection it is interesting to note the salaries paid the health officers in our State—70 per cent. of the health officers receive less than $100 per year; 87 per cent. receive less than $1.00 a day, not including Sundays, and only 13 per cent. receive more than $1.00 a day. All may be changed by the consolidation of several health boards into a consolidated health district; the combined salaries enabling the consolidated district to supply a well-qualified man, preferably on full time. Such an official can secure prompt control of communicable diseases, a clean and safe milk supply, a systematic inspection of other food supplies and efficient school medical inspection. With the assistance of one or more nurses, he can provide for the visitation of all infants, mothers and prospective mothers and sufferers from tuberculosis.

With an organization established as outlined what are the future points of attack in the public health campaign? For answer let us turn to the results of the medical examinations of the troops by the army and navy physicians since our entrance into the world war. What do the examinations of our enlisted men and conscripts show? The failure of seven out of every ten young Americans to measure up to the physical standard required for entrance in the United States Army and Navy. It is indicated that at least 5,000,000 men between the ages of 21 and 31 are unfit for military service. Furthermore, contrary to the prevailing view that the country-bred youth is stronger and healthier than his city cousin, the statistics so far gathered by our Government show that the number of young men defective, or in need of medical attention, is from 7 to 20 per cent. higher in the rural districts; largely due to the fact, as pointed out by our Federal Public Health officials, that the health of school children is almost entirely neglected in country schools.

In this State, with its universal medical inspection in our public schools, and a well-devised system of physical training and military exercises, the two great departments of health and education are cooperating with a view to remedying conditions, if not for the present generation of young men, at least for the generations of the future. However, our teaching should not end with our children and youths, but should be extended to our adult population. Both children and adults must be taught how to live right, and how to keep the body and its organs healthy. We must teach them sanitation, personal hygiene and the need of observing the common laws of health.

Our department last summer realizing that the health need of the hour was for the exercise of judgment in the selection of material for the family diet, devised an exhibit which was placed at the county fairs throughout the State and daily lectures were delivered by members of our staff on the relation of food to health. The real home guard is in the kitchen, and any housewife is a military leader of the commissary and should be ready to take the strategical and tactical offensive in protecting the family health and the family purse.

The army and navy medical examinations further corroborating our statistics have shown that germ diseases and diseases of childhood have been lessened; on the other hand, an alarming increase is shown in the death rate during middle life and early old age from degenerative diseases, due to the wearing out of the heart, kidneys and other hard worked organs of the body. How can we best create an appreciation among adults over 45 of the fact that a yearly physical examination by a competent physician would add many years to their lives? This is one of our problems.

Making the world safe for democracy requires military efficiency of a high standard, which must not be impaired by the wastage incident to alcoholism, tuberculosis and venereal disease, yet at the present time, excluding the deaths from pneumonia, more than one-half of all deaths occurring between the ages of 5 and 60 are due, directly or indirectly, to one of these three causes.

Public opinion is being enlightened with regard to the use of alcohol as a beverage. It is now known that the habitual use of alcohol reduces in a serious degree the productive efficiency of the community. One by one the Allies have ruled against its use, in order to enhance the efficiency of their population in this present war. Legislation has been made necessary in order that millions of tons of grain, hops and grapes should not be withdrawn from use as food and converted into drink. With the knowledge that the habitual use of alcohol is the prolific source of a great variety of diseases and disabilities in the human body, causing many frightful disasters in human reproduction and contributing largely to the innumerable instances of family poverty and distress, it remains for health departments to attack this hideous evil with the weapons and in the spirit of preventive medicine.

Dr. Rosenau, Professor of Preventive Medicine at Harvard, says: "As a danger to the public health, as a peril to the family, and as a menace to the vitality, health and physical progress of the race, the venereal diseases are justly regarded as the greatest of modern plagues and their prophylaxis is the most pressing problem of preventive medicine that confronts us at this present day."

"This war," says Wm. H. Zinsser, Chairman of the Sub-committee for Civilian Cooperation in Combating Venereal Disease of the Council of National Defense, "is doing one good thing. It is making people speak out loud about a subject that before was either ignored or dealt with in whispers."

The Empire State has spoken in no uncertain terms on the subject. Last winter through the efforts of our department the legislature passed an amendment to the marriage relations law providing that no marriage li-

cense may be issued in the State of New York until the applicants shall have subscribed to the following statement:

"I have not to my knowledge been infected with any venereal disease, or if I have been so affected within five years I have had a laboratory test within that period which shows that I am now free from infection from any such disease."

thus placing each of the parties entering into the marriage contract on their honor to disclose the presence or previous existence of venereal disease. Furthermore, the department has recently organized a Venereal Disease Committee composed of four members of the Departmental staff and the secretaries of the American Social Hygiene Society and the New York Social Hygiene Society. The problem is to be approached first from the educational and second from the therapeutic side. Physicians and laity are to be instructed as to the necessity of laboratory examinations before diagnoses can be made or cures confirmed. Dispensaries are to be established in our larger centers in connection with existing hospitals at which clinics may be held for the proper treatment of those unable to pay for the same. Furthermore, through the judicious use of departmental literature, press service, exhibits, speakers and nurses, a campaign of education will be conducted for the benefit of all in order that the knowledge of the causes and results of venereal disease may be disseminated. The department will also act in an advisory capacity, inviting correspondence on the subject. We are at present endeavoring to secure the cooperation of all private and semiprivate, as well as public institutions, throughout the State, in the treatment of the known cases of venereal diseases, since only a relatively small proportion of such patients are able to pay for proper treatment.

I need but mention the creditable work of the War Department in safeguarding the health of our soldiers. A definite policy in the control of venereal diseases has been established, for it is an acknowledged fact that the most serious health problems in modern armies are those relating to these diseases. Every army of Europe has suffered immensely because large numbers of their men have been incapacitated by venereal disease. To win the war our men msut be fit and this great State of ours cannot afford to send men infected with these diseases into the trenches. However, all activities having to do with the control of venereal disease require delicacy and reserve, as well as good judgment concerning the time, place and company in which they are discussed, but it is indispensable work in which the medical profession and boards of health should take an active and serious part.

The only other activity of the State Department of Health I would call attention at this time is in the control of another plague (the white plague) equal in importance to the one just described commonly known as the black plague. I would refer briefly to our activities in the control of tuberculosis.

Almost simultaneous with the announcement by Commissioner Biggs of the appointment of a Tuberculosis Committee of the State Health Department came the announcement of the appointment of the Venereal Disease Committee above referred to. Realizing that the ultimate elimination of tuberculosis from any community depends not only upon the execution of a scientific and constructive program but also upon the intelligent cooperation of all organized effort, the Department's Tuberculosis Committee, of which I am chairman, has outlined a comprehensive plan providing for the establishment of adequate tuberculosis hospital provision for each county of the state on the approximate basis of one bed for each average annual death in such county. In view of the probability of increased demand upon the capacity of these hospitals because of the war, in addition to the present large civilian needs, in accordance with the provisions of a statute passed by the last legislature, twenty counties of over 35,000 population not already possessing hospitals are now taking steps to provide suitable hospital facilities.

Another activity of this tuberculosis committee will be the securing of the attendance of all local tuberculosis hospital physicians for a course of instruction at Ray Brook in order to fit them better for their positions as hospital superintendents.

One of the most important activities decided upon by this committee will be the conducting of a series of tuberculosis clinics for the medical profession at which physicians may bring their doubtful cases for diagnosis by well-known specialists. Furthermore, in addition to the treatment of the patients, a systematic follow-up system of visitation by nurses will be inaugurated for the protection of those exposed to the disease at home, especially children.

The establishment of tuberculosis dispensaries and fresh air classes is to be urged in all centers of population together with the formation of children's preventive tuberculosis classes, which will be developed in selected districts.

Tuberculosis is a social problem of such vast proportions that it can scarcely be solved by public health administration alone. Practically every civic, charitable, health or philanthropic agency must cooperate. So widely does the tragedy affect human relations that each individual must be trained to a sense of personal responsibility. All the community forces working for human betterment must be coordinated insofar as they relate directly or indirectly to tuberculosis. The factors entering into the causation of the disease are so numerous that only in this manner can they be effectively controlled.

These are some of the important activities of the State Health Department, and some of the lines of work in which there is urgent need for more strenuous medical activity of more expenditure on the part of the public, and more well-informed zeal on the part of all persons interested in the welfare of the community.

DESMOID OF THE ADBOMINAL WALL.

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The term desmoid was first employed by Johannes Mueller to designate certain tumors of connective tissue origin, of tendon-like consistency arising from the abdominal wall. These tumors are somewhat uncommon and are of interest in so far as they occasionally present difficulty in diagnosis from intra-abdominal growths and incarcerated epigastric hernia.

From true desmoids should be excluded those tumors which have been described by Nelaton arising from the bony pelvis and invading the abdominal wall, as well as those designated fibromyomas of the round ligament occurring in the canal of Nuck. The term desmoid should be restricted to fibromas or fibrosarcomas, which arise from muscle-aponeurotic structures.

These tumors occur more frequently in women, about 81% are said to occur in this sex, and of these about 94% occurred in parous women. In the study of 16,631 tumors, Guerlt found that .13% were desmoids. Many have been observed to occur during pregnancy, or when pre-existing have been noticed to be stimulated to rapid growth during pregnancy.

Pathologically these tumors occupy a position midway between fibromas and sarcomas. They are disc shaped, a flat avoid or spherical, especially if large. They are smooth or slightly nodular on the surface, hard, and may present areas of softening due to cystic degeneration or to myxomatous or hemorrhagic changes. They vary in size from that of the hazel nut to that of a tumor weighing twenty pounds or more. There is usually imperfect encapsulation. Upon section a white, dense, smooth surface is presented. Microscopically the appearance is that of a cellular fibroma. Careful study shows that sarcomatous changes are evident in about 10% of tumors removed from females, and in about 24% in tumors removed from males (Pfeiffer). At the periphery there may be evidence of slight tendency to infiltration. Growth of these tumors is slow, neighboring muscle may disappear. The bulk of the tumor presents outward or inward into the abdominal cavity and may form attachments.

These tumors are situated most frequently in the right lower abdominal quadrant, arising from the rectus, its sheath or the lineæ transversæ. Next in frequency they are found arising from the external oblique, the fascia transversalis and the linea alba. The long axis is parallel to the muscular fibers from which they are growing, therefore those which lie in the midline of the abdomen lie longitudinally, and those which occur in the flanks lie transversely or obliquely. They are observed frequently above the umbilicus, arising from the posterior sheath of the rectus. These tumors are solitary.

Recurrences of these growths have been reported (Hanks, *Amer. Jour. of Obstet.*, 1883, XVI., p. 284). It has been estimated by Stone (*Annals of Surgery*, 1908, Vol. XLVIII) that recurrences occur in 90% in women and in 68% in men. According to Pfeiffer (*Beitrag Z. Klin. Chir.* XLIV., p. 334), recurrences have been noted in 21.3% in women.

Up to 1904 Pfeiffer has collected 400 cases, since this time and up to 1908, Stone has added ten more cases to this number, six of which he has collected from literature and three additional from the surgical clinic of Johns Hopkins Hospital. He adds one which occurred in his clinic in the University of Virginia. It is worthy of note that one case which occurred in a negro seems to be unique. For an elaborate consideration of desmoid tumors, the reader is referred to the article by Stone.

Three cases have been observed by the writer. In 1909 a case was seen occurring in a white, married woman of American birth, who presented a smooth, painless swelling in the abdominal wall about one inch from the mid line situated in the rectus muscle, about 3x4 inches in diameter.

At operation the growth was observed to spring from the rectus muscle. It was connected by a small pedicle which passed through a small opening in the posterior rectus sheath. The growth projected prominently inward and lay upon the peritoneum. It was excised. Microscopic examination showed a fibromyoma. The second case occurred in a male, machinist, age 16, who complained of a "lump in the side." It was a smooth, oval growth, long axis parallel with rectus, size of a plum, situated on the right side, below the naval. There were no symptoms. Operation refused. We have been unable to trace these cases.

The third case occurred in E. C., a single Italian woman of 23, who complained upon admission to the Greenpoint Hospital, Dec. 13, 1917, of a painful swelling in the right side of the abdomen. This was first noticed about three weeks ago, and was the size of a hazel nut. It was not painful at that time. A week later she experienced pain in it and noticed increase in size. Pain is described as "sticking," and is aggravated upon leaning forward.

Upon examination the abdominal wall is flabby. There is a mass the size of a hen's egg, at the level of the navel, about one inch to the right of the mid line. The overlying skin is not adherent, the mass may be picked up and is freely moveable. It appears to spring from the anterior sheath of the Rectus muscle and is attached only by a narrow pedicle. It is hard and nodular. The outline is well defined but irregular. There is no impulse on coughing.

At operation the tumor was dissected out and a thin pedicle seen to emerge from a smell perforation of the anterior rectus sheath, through which also passed a small perforating branch of the epigastric artery. Upon section the growth showed at the center what appeared like a degenerated cyst lining. It was glistening, in places multilocular. These cavities contained a light brown putty substance, somewhat resembling dessicated feces. At the periphery the growth was firm and white, resembling connective tissue. Microscopic report of cellular fibromyoma was received from the pathologist.

280 Jefferson Avenue.

STREET DUST AND ITS HORSE DUNG CONTENT.

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The horse dung content of street dust is a factor in hygiene wherever horse-drawn vehicles exist. In the main, however, it is an urban rather than a rural problem. The manner of its existence and the methods of its dispersion are practically the same everywhere. Excrementitious matter dropped in the streets and ground to varying degrees of fineness is spread broadcast by the wind. Being extremely light it is easily lifted by the wind and is therefore carried farther than most other kinds of street dust.

The composition of horse dung is not materially different from that of other excrement. Briefly it is:

(a) Non-digestible matter—fibrous cellular substance and gums;

(b) Soluble biliary and intestinal products, skatol and substances similar to phenol and indol—possibly identical with them;

(c) Germ life—bacilli, micrococci and myxobacteria.

A discussion of the third group is out of place in this paper. The members of the first group are harmless *per se*, but they are commonly saturated with substances of the second group, every one of which, if not poisonous, is deleterious.

The texture of the indigestible part explains the ease with which it is dispersed. It consists mainly of fibrous cellulose, such as the external part of the stalks of graminaceous plants, and the glume and husk of grain. This part remains saturated with the soluble matter which it retains with the same tenacity that fiber holds dyestuff. When voided, particles of this substance are comparatively coarse, and the varying size depends chiefly on the masticatory powers of the animal. Attrition sooner or later reduces the fragments to microscopic sizes.

Pulverization begins as soon as the substance is dry. The impact of vehicle tires and the scuffing of hoofs

spreads the substance; the wind does the rest; it is the factor that keeps this, as it does other street dust, in constant motion. Finally the particles are worn to such minute dimensions that decomposition resolves them into gaseous elements—mainly carbon dioxide, ammonia and water. The disintegration may result from processes that are purely chemical, but it is likely that bacterial agencies also are factors.

The coarser particles are deposited in places whither they are carried by the prevailing winds; the smaller particles, say, from one to ten microns in measure, become a part of the floating dust of the air. Incidentally, they are carried by air currents wherever air currents go. They readily pass through the crevices of windows and doors, and into closets and drawers. A vulcanite cell kept in a box within a box, on the shelf of a closet, acquired a gray film of dust so fine that a quarter-inch objective was necessary to resolve it satisfactorily. The most noticeable part of the dust content was horse dung; the greater part was furnace dust. Windows facing the street and likewise the prevailing winds explained the presence of the one; unskillful manipulation of the heater the other.

Because of their extreme lightness, horse dung and leaf dust are carried higher in the air than other kinds of street dust of the same degree of fineness. From the nature of their composition one might infer that they would become more highly electrified than particles of earthy matter. Inasmuch as their suspension in the air depends largely on the potential of their electrification, this aspect of the matter is important. However, though the inference is plausible, the fact that they are more highly electrified is not yet established. Nevertheless, the fact that particles of one micron in dimension will remain floating in dry air anywhere from ten to twenty-four hours has been established and, while floating, gentle air currents will carry them wherever air currents may penetrate.

The city in which these investigations were made has a population of about 40,000, and is one of the richest cities in the state in proportion to its population. Nominally the municipal government is administered by one or the other of the two leading political parties; in reality it has long been in the hands of a coterie of men of both parties who represent themselves only. The streets are swept by stiff rattan brooms and politics—the latter factor being kept in good order. The main thoroughfares of the city are hard-paved; in a few instances the paving is of vitrified brick. The main business street is cleaned by a man with a scraping pan. In every case the result is the same. A long streak of excrementitious matter marks the path of the broom or the scraper. Not much more than one-half reaches the pile designed for the cartman. The rest is ground finer and finer by successive sweepings until it is dry enough to be picked up by the wind. Then it becomes in succession rolling dust, flying dust and floating dust. In reality the hard-paved streets are cleaned only when a heavy rainfall occurs. If this process of cleaning hard-paved streets is a farce, the manner of cleaning brick-paved streets is high comedy. The method does not remove dust; it creates dust.

The tarring of macadamized streets is the one redeeming feature of the system. The tarring of the street in one instance abated more than ninety-five per cent. of the flying dust falling on a porch which faced the wind. It also eliminated the fly nuisance from the street. For several weeks the surface of tarred streets retains its stickiness and thereby holds any rolling and flying dust that may fall upon it. To a limited extent, it sterilizes excrementitious substances. This property, however, is not long retained. In the course of a few weeks tarred surfaces harden and begin to crumble; then the grinding of wagon wheels quickly converts the broken fragments into dust. The dust particles from disintegrated tarred streets are not only less mobile than particles of earthy matter; they are more adhesive and cohesive. They do not fly unless driven by winds of gale intensity; they float apparently not at all.

The investigations of the dust conditions noted began in a school building, and there was no anticipation that they would extend beyond the building at the time they were begun. The question was to find the cause of the discoloration of the walls and ceilings of a newly-decorated building. The answer to the question was very quickly found. Smoke-carbon was the coloring material; furnace dust helped materially to cement it to the walls and ceilings. The ducts and air-passages offered an interesting field for study. There were furnace products of every sort; but the important feature was the presence of horse dung and other street dust. These substances were drawn into the ducts at the intake; the dust of the ducts could not have been tracked into the building. The intake, at ground level, offered the very best facilities whereby dirty air might be delivered to the various rooms of the building. There were no screens to prevent the entrance of street dust, and the streets in the vicinity were very dirty. Horse dung was found also in the dust of many rooms of the building, but much of it undoubtedly was tracked in. The low humidity in every school building during the time when the heater is in operation tends to keep the dust of school buildings highly electrified and therefore floating. That was the condition indoors.

Out of doors slides at different levels caught an abundance of dust—coarse and fine, organic and inorganic—practically all blown from the streets. Along the main thoroughfares, both indoors and out of doors, dust from the streets covered pretty nearly everything not in air-tight containers. It was multifold in variety and in quantity. Fruit exposed along the sidewalks in open-front shops was not only plentifully sprinkled with horse dung; it also bore evidence of defilement by dogs and by flies. Municipal ordinances required perishable goods to be screened; they also forbade dogs running at large. The ordinances apparently were nowhere enforced.

Horse dung was found to be the chief dust substance along the main thoroughfare, and the manner of removing it has been described. The piles into which it was swept for the cartman were not removed at once. Motor cars and delivery wagons immediately redistributed much of it along the street again and the scraping pan ground it a bit finer.

The part carried off by the rain offered a fine field for investigation. The crevices next the curbs and the flagstones were filled with putrescent matter. Such places form the breeding places for flies and flies were breeding in them. Maggots and pupae were abundant during moist and rainy weather. Indeed, the principal business streets of the city seemed to be the principal fly-breeding places. Many of the shopkeepers have made earnest efforts to screen their goods from the plague of flies but, with the breeding spots in front of their doors, not much can be done. It is hardly necessary to add that, with a little intelligent effort, a fly plague can be eliminated from any locality. Intelligence, however, is not apt to be a factor when the affairs of a city are administered on a political basis.

An examination of the nearby streets showed several

prolific breeding spots. On a parallel street there was a strip about two hundred feet in length protected by a hedge and a fence. Along this strip wind-blown horse dung had accumulated to a depth of two or three inches. The eggs of flies had been deposited in great numbers in the accumulation and a warm rain brought an abundance of life. The moral is obvious; so also is the relation between wind-blown horse dung and fly production. In a city of 40,000 people, millions and millions of flies die during the warm season, and the fragments of their bodies are a marked feature on dust slides. The possible dangers from such a source are problems for the physician and the bacteriologist.

In thickly crowded communities dust and insects are the chief menace to public health. In the foregoing cases the horse dung content of the street dust is responsible for most of the flies. Not only are ordinary foodstuffs infected, but in this particular city the water supply was found to contain a goodly content of colon bacilli. That part of the investigation was not made from this laboratory; it was made by a bacteriologist of the highest standing.

Conditions of this sort in any community are wholly unnecessary; moreover, they are easily preventable. There is no great difficulty in removing horse dung from city streets. In this particular city the cost needs not be greater than that now incurred in spreading it over the streets. Not all the street dust can be kept out of the air, but most of it can be kept on the ground and removed without creating more dust. Under the system followed, a great deal of dust is created in order to remove a very little. The unsanitary condition of public streets is due more to lack of intelligent effort than to financial difficulties. A municipality is apt to get the administration it deserves, but not necessarily one that it needs.

Meteorological Laboratory.

PROGRESS IN DISEASES OF THE NOSE, THROAT AND EAR DURING THE YEAR 1917.

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Chicago.

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War Injuries and Neuroses of Otological Interest.

H. J. Marriage (*Jl. of Lar., Rhin. and Otology*, June, 1917) gives the results of the observations of eight physicians besides himself on warfare injuries and neuroses. Wounds of the auricle are quite simple for treatment, plastic operations being sometimes required to replace lost tissue. The blood supply being ample favors a good result. Gunshot wounds of the external auditory meatus generally are made by missles passing through at right angles to the axis of the canal. There are likely to be giddiness, nausea and more or less deafness due to shock to the labyrinth, and the facial nerve may suffer injury, causing facial paralysis of some degree. Middle ear suppuration is likely to ensue, but, as the membrana tympani is generally ruptured in such cases, drainage is ensured. When shock is the principal cause of most of the symptoms, deafness and facial paralysis gradually disappear and the suppuration ceases after the usual treatment. Cicatricial stenosis, or atresia, of the external canal must be guarded against.

Referring to ruptures of the drum head by shells, he calls attention to the fact that when shells burst and break windows, the glass falls outward, "owing to rarefaction of the air after the explosion. A similar effect upon the air may cause rupture of the drum head, the perforation occurring in the membrana tensa, rather than in the membrana flaccida. The commonest symptoms are a marked deafness, with, at times, a loss of consciousness for a few minutes and often a slight bleeding from the ear, serous discharge, tinnitus and slight vertigo." About one-third of the cases had a subsequent discharge, but healed without much difficulty. Marriage and Cheatle had to operate upon one case each for mastoiditis among this class of work.

Cheatle reported "a case of hemorrhage into the middle ear, due to a parachute descent. An airman, aged 21 years and 10 months, fell a distance of 13,000 feet in four minutes. He had a feeling of deafness and stuffiness of the left ear, and crackling when yawning. The left middle ear was full of blood, with an intact membrane. The hearing was only slightly diminished. In about a month the blood became absorbed, and the hearing had returned without treatment."

Direct injuries to the labyrinth generally have proved fatal. Indirect injuries to the labyrinth, caused by falls, blows or a bullet wound producing fracture, through the petrous pyramid are followed by extreme or total deafness, marked disturbance of balancing, with loss of the cochlear and vestibular functions." If the labyrinth capsule is injured, there is an escape of cerebro-spinal fluid, otherwise not.

Concussion deafness may result from constant exposure to the daily firing of guns, and the result is a certain degree of deafness, such as we commonly find among boilermakers and those who are engaged in naval gunnery in peace times. "Deafness due to the explosion of a shell is generally for a short time very severe, and at times the patient has been rendered unconscious, but the deafness has never been absolute." There are intense deafness with headache, sometimes marked tinnitus, and in severe cases nausea and vomiting. Marriage adds: "The drums have been normal." We would naturally expect to find the drum membranes ruptured. "A large proportion of these patients recover their hearing in the course of one or two months, but others improve very little. The treatment I have adopted in these cases is complete rest in bed with the administration of bromides in the early stages, and later strychnine." The progress is slow, and the prognosis is very uncertain. "If marked improvement does not occur within six or eight weeks, the outlook is distinctly bad. Even when the hearing returns, tinnitus persists." Psychical deafness produced by shock and accompanied by other nervous symptoms is treated as thoroughly as the small number of cases would permit.

In the September number of the above mentioned journal, Macleod has an article on "An Air Raid Case."

The Mastoid Operation of 10 Years Ago and Today.

Philip D. Kerrison (*J. A. M. A.*, Jan. 27, 1917) gave a comprehensive review of this subject. Referring to the bone operation, he said, "With minor differences, the bone operation of ten years ago was practically that in use today." He cautions against excessive scraping of the bone as being injurious to the minute blood vessells of the bone, "as a result of which repair is retarded until the vascular supply is re-established," endangering the vitality of the bone. He also inveighs against irrational pressure of the gauze packing after operations: "Repair throughout the entire wound surface being retarded, epidermization from the skin margins has extended into the wound cavity, resulting in eventual recovery, but with the formation of an unsightly cavity, or depression, behind the ear."

The reviewer can add another serious objection

against too firm packing of the wound, particularly after the radical operation. Following an operation which he performed upon the wife of a Chicago surgeon, an assistant packed the gauze so tightly into the wound that it produced pressure upon the exposed facial nerve, and, although there were no signs whatever of facial paralysis after the operation was completed, on the second day facial paralysis appeared. This, however, was relieved after the dressing was removed, but the functions of the nerve were impaired to a moderate degree for a considerable time. Kerrison does not favor the blood-clot operation, but endorses with marked emphasis the preservation of the periosteum. After inserting a wick of gauze, he sutures the wound to within a half-inch of its lower extremity. The dressings and wicks are changed daily until the wound is healed. The obstructive type of tonsils and adenoids should be removed in preparation for the mastoid operation.

In the discussion of Kerrison's paper, R. B. Canfield said, "We should operate as radically as we can without producing too much deformity, and during the after treatment leave the case alone, to the benefit of the patient." He did not favor the blood-clot operation.

Cullen F. Welty said: "The more thoroughly the cells are removed, the more sure you are of a complete cure. In Politzer's clinic 12 years ago, more than 5 per cent required a secondary operation. I do not believe in the blood-clot operation because an occasional case will develop a serious brain lesion that would have gone along without any trouble by the open method. Four or five years ago a New York otologist reported seven deaths following the acute mastoid operation by the blood-clot procedure. On the other hand, I wish to report 120 cases of my own acute mastoid operations by the open method without mortality. Those cases were not selected."

Joseph C. Beck uses the rubber tube and gauze for drainage, and light packing, and removes them as soon as the discharge from the auditory canal ceases.

The reviewer's experience teaches that the principal rule of action to insure safety and success in all operations must be: Remove all necrotic tissue, secure unobstructed drainage, and employ dressings that produce only a moderate degree of pressure. Do not overlook the possible presence of bacteria, syphilis or tuberculosis, which may retard or defeat a cure. Meeting indications for general treatment may have a determining influence upon the result.

At the eighth annual session of the Clinical Congress of Surgeons held at Chicago in October, 1917, the Dakin-Carrel solution, as applied to wounds in France, received much commendatory notice, and more particularly Dakin's improvement, known as dichloramine T. This preparation has been employed in 7,000 cases with admirable results. However, Sir Berkley Moynihan, the eminent British surgeon, and Major George W. Crile discredit the value of this treatment. Still, it would seem to be worth while to give it a fair trial after mastoid operations, using the five per cent solution in the form of a spray.

The Campaign Voice and Its Management.

L. D. Alexander, Jr., (*Laryngoscope*, May, 1917) gives his experience in managing a campaign voice used at high pressure for three months while traveling about 30,000 miles and making over 500 speeches. He found that "The prolonged effect of speaking causes congestion of the entire head" and an abnormal secretion of mucus, which breaks the voice in the midst of a sentence." "A distinct congestion of the external nose is noted, while examination immediately after speaking reveals turgescence of the turbinate bodies and congestion of the entire membrane." Often there is "a state of congestion from pharynx to trachea, and the palatal pillars and uvula are relaxed. The false cords are congested, the true cords are congested and edematous with accompanying partial paresis. A sticky secretion, mucoid in character and very adherent, may be noticed between the arytenoids and in the adjacent trachea, causing frequent dry cough."

Alexander advises breathing and vocal exercises before entering upon a campaign in order to ensure correct methods. As complete an office outfit as possible should be carried on the trip: compressed air, steam inhaler, ice bag, examining instruments, spray solutions and atomizers, alkaline, astringent and oily sprays, argyrol and adrenalin. Laryngeal applicators are impracticable because of the necessity of administering treatment on swaying trains running from 40 to 60 miles an hour. Remedies for general conditions and surgical injuries should be carried in view of the shooting of Presidents McKinley and Roosevelt. A day treatment of cleansing the nose and throat, followed by a laryngeal spray of argyrol upon the cords is given. Soon after, deep inhalations of an oily spray are to be taken. At night, massage of the throat is practiced, followed by a steam inhalation of essential oils and balsam in an alkaline menstruum. In paresis of one or both cords, 1/40th grain of strychnine three or four times a day is called for.

The End Results of Treatment of Chronic Suppurative Otitis Media.

John F. Barnhill (*J. A. M. A.*, Jan. 6, 1917) advocates the removal of diseased conditions which interfere with nasal breathing, even in ear suppuration, which cannot be classed as operative. He takes the logical position that diseases of the nose and throat which predispose to ear disease must be eradicated in order to remove the resulting ear disease. He appears to take altogether a too pessimistic view of the results of such thorough treatment as he advises, according to the reviewer's experience in both clinical and private practice during a period of 40 years. In the class of lesions involving brain abscess and sinus thrombosis his lines are more cheerful. He says, "About 50 per cent of these cases are now cured, whereas formerly one per cent was regarded high," and he makes the prediction of a still better result in the future. Speaking of lepto-meningitis as a complication of ear suppuration, he says, "Practically now all patients die, whether operated upon or not." We will all agree with the essayist that all physicians should help to educate the public to the importance of suppuration of the ears, and the disastrous consequences which often follow their neglect. It surpasses understanding why the average physician does not insistently perform his simple duty which he owes to his patients. Fewer cases of deafness, mastoiditis, meningitis and brain abscess would make life a burden and, in fact, destroy life, if the family physician were sufficiently well informed and honest and frank enough to put these patients in the way of a cure while they were yet curable. At the last meeting of the American Medical Association, the majority of the speakers were unequivocally in favor of early and thorough operative procedures for chronic middle ear suppuration and its sequellae.

Perhaps the needless and ruthless sacrifice of teeth has been greatest in patients suffering from arthritis deformans

THE DIFFERENTIATION BETWEEN THE TOXEMIAS WHICH OCCUR LATE IN PREGNANCY.

With Special Reference to the Prognosis in Future Pregnancies.*

ALFRED C. BECK, M. D.,
Brooklyn, N. Y.

Toxemia occurring late in pregnancy often presents one of the most horrible clinical pictures in medicine. Early in its course headaches appear. These are constant and increase progressively in severity until they are unbearable. Frequently edema is very marked. The lower extremities become twice their normal size. The labia and abdominal wall are the seat of extreme infiltration. When rings are worn on the fingers they not only become too tight, but frequently cause deep furrows in the edematous tissue. The face appears puffy and in severe cases is so distorted that the patient is no longer recognizable. Blurring of the vision is a common symptom. Spots appear before the eyes and occasionally total blindness is observed. If the condition progresses, convulsions and coma follow.

The attending physician who has observed the course of such a toxemia naturally is fearful of the result should his patient later become pregnant. In the past he has advised against future pregnancies, or has resorted to early therapeutic abortion. In spite of this advice pregnancy occasionally occurred, and abortion was refused. The outcome in these cases in which gestation was not interfered with frequently did not justify his anxiety, but showed that there are two distinct varieties of this conditon. In one the pregnancy goes to term without any sign of recurrence. In the other the symptoms recur earlier and with greater severity.

Fatal cases likewise revealed two different pathological pictures. One invariably was characterized by a typical lesion in the liver, which consisted of a perilobular thrombosis, with necrosis of the periphery of the lobule. Involvement of the kidneys was usually observed, but this was considered more or less transient, as it showed nothing more than congestion and cloudy swelling. Because of the liver necrosis the term hepatic toxemia was given to this variety. In the second group the typical findings of nephritis were noted. This as a result gave rise to the use of the term nephritic toxemia to differentiate these cases.

Clinically we can differentiate between these two pathological conditions in the majority of instances, and a correct prognosis as to future pregnancies depends upon our ability to make this differentiation. Our experience has shown that the nephritic cases recur, while the hepatic ones are no more susceptible to toxemia in subsequent pregnancies than are women whose previous pregnancies were uncomplicated.

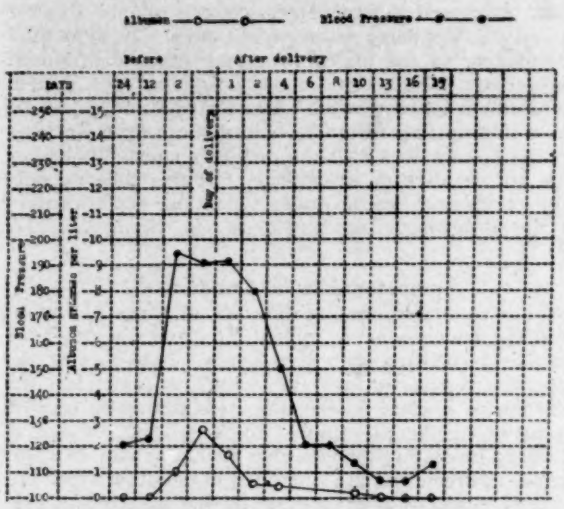
A study of the blood pressure and urine during and immediately following the toxemia is the most valuable aid in determining its type. In the hepatic cases the symptoms come on suddenly, are marked, and rapidly increase in severity. Because of this insidious onset it is our custom to observe prenatal cases weekly during the last two months of pregnancy. Following the subsidence of symptoms the blood pressure and urine rapidly return to normal. Nephritic toxemia is more gradual in its course and frequently is preceded by a history of a previous nephritis. Following delivery the blood pressure and urine gradually approach normal, but continue to show evidence of permanent renal injury. In the foregoing outline I have briefly recorded the symptoms and signs in a tabular form, so that they may better be compared.

*A clinical lecture delivered at the Long Island College Hospital.

SYMPTOMS AND SIGNS.	HEPATIC TOXEMIA.	NEPHRITIC TOXEMIA.	
History—Prior to Present Pregnancy.	Negative	Previous Renal Lesion	Absence of Previous Renal Lesion
Blood Pressure.	Normal up to latter months of gestation. Usually only a few weeks before onset of convulsions it progressively rises. Occasionally it remains normal throughout.	Elevated throughout. Gradually rises with or before onset of symptoms.	Normal up to latter months. Always rises gradually as symptoms become more severe.
Albuminuria ..	Almost invariably present. Usually first seen only a few weeks or days before onset of convulsions. Rapidly increases.	Present throughout. Gradually increases with the blood pressure.	Absent during first trimester. Present during latter half of pregnancy. Gradually increases with symptoms.
Headache	First observed soon after elevation of blood pressure and presence of albuminuria. Constant in character and progressively increases in severity.	Present more or less throughout. Gradually increases as pregnancy progresses.	Absent in early months. Present several months before onset of convulsions.
Edema	May be absent throughout. If present first seen a few weeks or days before onset of convulsions.	Absent or present early. Always present late. Gradually increases.	Absent early. First observed in second half of pregnancy. Gradually increases.
Visual Disturbances	First noticed only a week or few days before convulsions. Rapidly increase in severity.	Absent or present early. Gradually increase.	Absent early. First observed in latter half of pregnancy. Gradually increase.
Convulsions	Onset only a few days or weeks after first symptom of toxemia. Blood pressure may be normal at this time. Albuminuria marked.	May come on at any time, depending upon severity of the nephritis. Blood pressure elevated. Albuminuria marked.	Onset late in pregnancy, but several months or weeks after first symptom of toxemia.
FOLLOWING SUBSIDENCE OF SYMPTOMS AND DELIVERY.			
Blood Pressure.	Falls rapidly. Normal in ten days to two weeks.	Gradually falls. Remains above normal for months.	Gradually falls. Remains above normal for months.
Albuminuria ..	Disappears rapidly. Absent in about two weeks.	Gradually diminishes. Continues as in nephritis.	Gradually diminishes. Continues as in nephritis.
Prognosis as to Future Pregnancies	Danger of recurrence no greater than in any other pregnancy.	Recurs earlier with greater severity.	Recurs earlier with greater severity.

We are fortunate in having in our ward several cases which illustrate the points of difference between these two types of toxemia. As we see each patient I shall limit our discussion to only such parts of their histories as are pertinent to this subject.

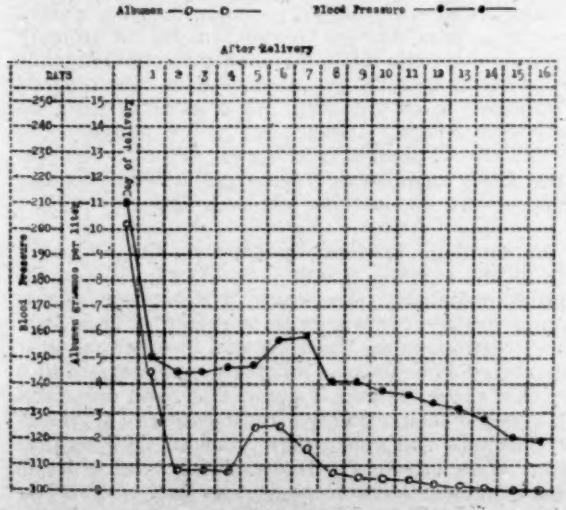
Case I. C. C. Para-4. Previous pregnancies free from toxic symptoms. Last menstruation eight months ago. Patient has been under observation in the prenatal clinic since the third month. When seen two weeks before delivery no symptoms of toxemia were present; the blood pressure was normal, and the urine showed no albumin. Ten days later she complained of severe headaches. At that time the blood pressure was 195 and the urine contained about 1 gm. of albumin to the litre. She was advised to come to the hospital, but did not enter until two days later, when the ambulance brought her in after she had had four convulsions. On admission the blood pressure was 190 and the urine showed 2½ gms. albumin to the litre. Her pregnancy was terminated by the delivery of a dead fetus on the day of admission. She had nine convulsions, including those which occurred at home. Following delivery the patient rapidly recovered. The accompanying chart shows the blood pressure and albumin curve prior to and following labor. This was undoubtedly an hepatic toxemia for the following reasons: The sudden onset, the rapid rise in blood



Case I.—C. C.

pressure which previously had been normal, the sudden appearance of a large amount of albumin in the urine, and the early disappearance of albuminuria following delivery, accompanied by the rapid return to normal of the blood pressure. We do not anticipate a return of this condition in subsequent pregnancies, and on discharge she shall be advised to that effect.

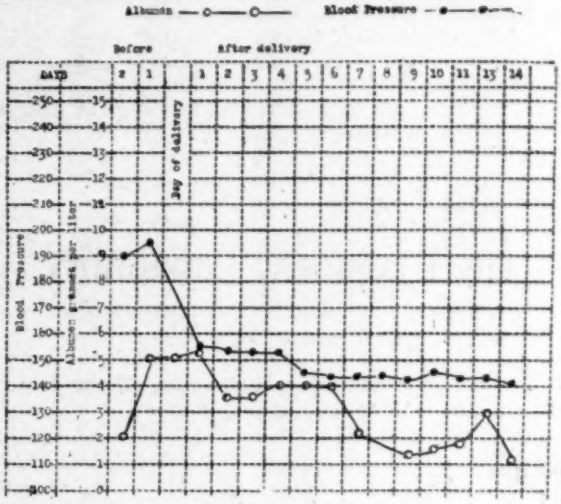
Case II. N. F. Para-2. This patient was treated for eclampsia on our service two years ago. Following her recovery I told her that she was in no great danger of a recurrence. She was delivered six days ago of a full term infant after having gone through a perfectly normal pregnancy. I shall first discuss her previous pregnancy: About two years ago this patient was brought to the hospital in a state of coma, which followed several convulsions. Up to one week before the onset of convulsions she had been free from symptoms. At that time severe headaches and edema of the lower extremities were complained of. These grew progressively worse and in a few days were accompanied by visual disturbances. On admission her urine contained 10 gms. albumin to the litre, and her systoic pressure was 210. I did a vaginal cesarean section, thereby terminating her pregnancy at the eighth month. Recovery was uneventful. The blood pressure and urine rapidly returned to normal. I have included her chart to show the similarity between the curves in these two cases. Because of the sudden onset and the urine and blood pressure picture, her case was diagnosed as hepatic toxemia and she was advised to return to us early in her next pregnancy. The present pregnancy is of no interest other than to show that we were justified in allowing her again to become pregnant. She has been under observation weekly since the third month, and at no time has any



Case II.—N. F.

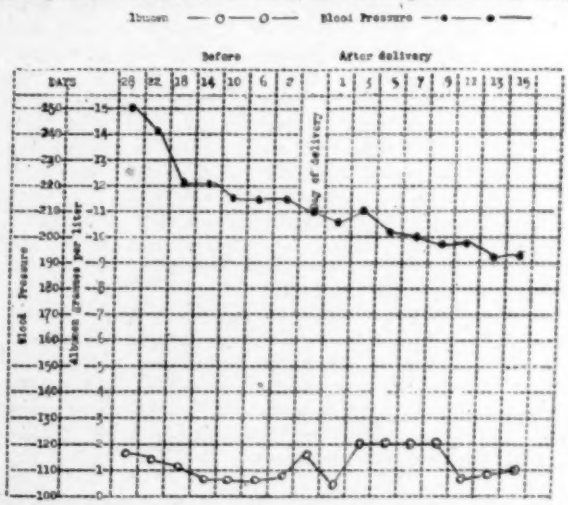
evidence of a recurrence been noted. The blood pressure remained below 120 and the urine was albumin-free throughout. She went into labor six days ago and spontaneously delivered herself of a full term infant. Both mother and child appear to be in excellent condition.

Case III. A. W. Para-4. First pregnancy was uncomplicated and went to term. Second pregnancy was accompanied by headaches, edema, and blurring of the vision during the last three months. These symptoms were slight at first,



Case III.—A. W.

but slowly increased in severity. Delivery was spontaneous at term. In all probability her toxemia was nephritic because of the gradual course. Unfortunately she knows nothing concerning the condition of her urine and blood pressure at that time. The third pregnancy was complicated by the return of the above symptoms after the fourth month. At the sixth month she had five convulsions and her physican terminated the pregnancy. Following this the patient complained of a dimness of vision for several months. She appeared at the prenatal clinic three weeks ago, at which time she was in the third month of her fourth pregnancy. Severe headaches had been present for about one week, her blood pressure was 200,



Case IV.—M. L.

and the urine contained 5½ gms. albumin to the litre. Accordingly I did an anterior vaginal hysterotomy and emptied her uterus. Following operation her recovery has been much slower than in the two previous cases, and, as is shown on her chart, the blood pressure remains somewhat elevated and albuminuria is marked at the present time. Had her second pregnancy been studied more carefully, I believe that the difficulties which occurred in the subsequent gestations might have been anticipated and the patient advised to avoid future pregnancies.

Case IV. M. L. Para-7. Two years ago this patient was delivered by our service after showing marked symptoms of cardiorenal disease. She was warned against the danger of recurrence. Contrary to advice she again became pregnant and returned to the prenatal clinic four weeks ago. At that time she was in her eighth month. Her blood pressure was 250 and the urine contained albumin. Hospital care was advised. She was treated expectantly for four weeks. Two weeks ago I did a conservative cesarean section, sterilizing the patient at the same time. Since delivery the blood pressure has remained above 190 and albuminuria persists.

I. All late toxemias should be studied carefully in order that proper advice concerning future pregnancies may be given.

II. Hepatic toxemia is followed by no great danger of recurrence in future pregnancy.

III. Nephritic toxemia always recurs and all cases should be advised to avoid becoming pregnant.

200 Hicks Street.

The Diagnostic Laboratory

Conducted by CHESTER T. STONE, M. D.,
Brooklyn, N. Y.

Enrichment Method in Examining Feces for Parasitism.

Carles and Barthelemy discuss the shortcomings of the different methods in vogue for detecting helminths, their encysted forms and ova in stools. They declare it is necessary to fluidify and homogenize the specimen of stool and bring it to the exact specific gravity most effectual for centrifuging out the parasites and their ova. They get rid of the coarser elements by passing the material through a wire sieve and a silk sieve (Hall). They take 20 gm. of feces to begin with, and dilute with physiologic salt solution containing 10 per cent. formol. The silk sieve has 90 threads to the centimeter (No. 90), except when seeking for ova; these require No. 32. The sieved fluid is then distributed in the centrifuge vials and centrifuged at 1,800 turns for one minute. The supernatant fluid is decanted and the sediment treated with a mixture of 12 gm. citric acid and 2 gm. of a 40 per cent. solution of formol and 86 gm. of water. The specific gravity of this is 1.047. Then 1 or 2 c. c. of ether is added and the tube agitated briskly to detach the sediment. Centrifuge for thirty seconds at 1,800 revolutions. Stir up the zone separating the ether from the fluid, using the tip of a pipet closed in the flume. This is to restore any cysts that might have been carried up by the ether. Then centrifuge again for thirty seconds as before, and decant all but the sediment. By this technic there is nothing left in the sediment except the helminths, encysted forms of protozoa, ova, and a little other debris of high specific gravity. The specimen is then ready for the microscope and gives exceptionally clean and clear microphotographs as they illustrate by a few examples showing the lamblia and the encysted forms, with only a few vegetable cells, in one of the four microphotographs. (*Jour. de Med. de Bordeaux*, September, 1917.)

Phenolsulphonephthalein Absorption.

Mehrtens and West summarize their paper as follows: Phenolsulphonephthalein when injected into the subarachnoid space in normal persons appears in the urine in ten minutes or less. Diseases of the central nervous system, especially when involving the meninges, produce a lengthening of the appearance time to as much as seventy minutes in some cases. This delay cannot be accounted for by disease of the kidneys, or by the reduction of the phenolsulphonephthalein in the spinal fluid. Advanced general arteriosclerosis may be a factor in causing the delay in some instances. In syphilis a lengthening of the appearance time may be produced before any other evidence of central nervous system involvement has appeared. The method may prove of value in detecting instances of organic central nervous system disease in which the ordinary spinal fluid findings are negative or incomplete. At this time no definite conclusion can be drawn as to the exact location of the absorbing tissues. (*Arch. Int. Med.*, Oct. 17, 1917.)

Acetonemia in Children.

Guidi comments on the difficulty at times of distinguishing between acute appendicitis and an attack of periodical vomiting with acetonemia. Palpation of the appendix region through the rectum is sometimes the only means to clear up the case. He advises in case of persisting doubt to remove the appendix. There is always a possibility that the two affections may be associated. Three cases are described in detail in which the profuse elimination of acetone by the breath and kidneys was accompanied by frequent vomiting and occasional severe diffuse pains in the abdomen, the pulse fast and small, and the children were restless and felt badly, and there was no stool. The abdomen was distended, but this was uniform, and no specially tender points could be found. While the surgeon was studying the first case with the internist, all the symptoms suddenly subsided. No purgatives had been given, but slight peristaltic movements were detected while the abdominal walls were not contracted. The acetonemia subsided under large doses of sodium bicarbonate by mouth or rectum. There was no movement of the bowel until the fifth day, but by the end of the week the child seemed to be perfectly well again. This child and the second were under 3, and the other was 6. This was the first attack of acetonemia in the last two cases; the first child had had at 18 months a similar attack of vomiting with abdominal symptoms. The intestines in the three cases seemed much dilated—evidently a paresis from the toxines in the blood. Guidi has encountered other cases of acetonemia in which there was paresis of the bladder and retention of urine, compelling catheterization, but these disturbances are always transient and disappear with the acetonemia. (*Rivista di Clinica Pediatrica*, Florence, October, 1917.)

Simple Method of Obtaining Blood Serum.

Wohl describes his method as follows: Place a small piece of paraffin (0.5 gm. is sufficient for an ordinary 6-inch serologic test tube) into a container that is ready for sterilization, cork it and sterilize it. On removal of container from sterilizer, roll it so as to cover its walls with paraffin. It takes only a few minutes until the thin film of paraffin is hardened. To clear the container rinse it with cold water until all the blood is removed, melt the paraffin and pour off.

Tuberculous Sputum Twenty-two Years Old.

In all the material examined by Burns acid fast organisms resembling tubercle bacilli structurally and in staining qualities were seen to be present. They were more numerous in the dried material in which no other organism could be found. No growth was obtained such as would prove, or even suggest, that these organisms still retained their viability. Innoculation of both culture mediums and guinea-pigs produced only negative results in the attempts to recover living tubercle bacilli from the material examined. (*Am. Rev. of Tuberculosis*, Oct. 17, 1917.)

PERSONAL HISTORY OF APPLICANT FOR APPOINTMENT IN THE MEDICAL RESERVE CORPS, UNITED STATES ARMY.

Give your name *in full* (including your full middle name):.....

The date of your birth:..... The place of your birth:.....

When and where were you naturalized (if of alien birth)?.....

Are you married or single?..... Have you any children; if so, how many?.....

What is your height in inches?..... Your weight, in pounds?.....

Give the nature and dates of all serious sicknesses and injuries which you have suffered:.....

.....

.....

.....

Do you labor under any mental or physical infirmity which could interfere with the efficient discharge by you of the duties of a medical officer?.....

If either parent, or brother, or sister has died, state cause and age in each case:.....

Do you use intoxicating liquors or narcotics; if so, to what extent?.....

Have you found your health or habits to interfere with your success in civil life?.....

What academy, high school, college, or university have you attended? State periods of attendance from year to year, and whether you were graduated; giving date or dates of graduation:.....

.....

.....

Name any other educational advantage you have had, such as private tuition, foreign travel, etc.:.....

.....

Give all literary or scientific degrees you have taken, if any, names of institutions granting them, and dates:

.....

With what ancient or modern languages or branches of science are you acquainted?.....

When did you begin the study of medicine, and under whose direction? His residence?.....

.....

How many courses of lectures have you attended? Names of colleges and dates:.....

.....

When and where were you graduated in medicine?.....

(Fill this out and send it to the Surgeon General, U. S. Army, Washington D. C.)

Have you been before a State Examining Board? If so, state when, where, and with what result: .....

.....

Have you had service in a hospital? If so, state where and in what capacity, giving inclusive dates of each kind of service: .....

What clinical experience have you had in dispensary or private practice? .....

.....

Have you paid particular attention to any specialty in medicine; if so, what branch? .....

What opportunities for instruction or practice in operative surgery have you had? .....

.....

Have you previously been an applicant for entry into the United States service? If so, state when, where, and with what result: .....

Are you a member of the organized militia? If so, state with what organization and in what capacity. .....

.....

Have you been in the military or naval service of the United States? If so, give inclusive dates of service with each organization, designating it: .....

In case of war or threatened war, will you accept active service for duty with the Army, should your services be needed? ....

What occupation, if any, have you followed other than that of student or practitioner? .....

Present or temporary address:† ....

Permanent residence:† .....

I CERTIFY that to the best of my knowledge and belief the above statements are true.

Signature ☞ .....

Date, ..., 191

Subscribed and sworn to before me, this .....day of .....A. D. 191

[SEAL] .....

[Signature and official title.]

†The candidate should give his present address for correspondence, and also his permanent address to which he desires commission sent should he be appointed.

FURNISHES PERSONAL HISTORY

IN CONNECTION WITH

APPLICATION FOR APPOINTMENT

IN THE

MEDICAL RESERVE CORPS, U.S. ARMY

..... *Inclosures*

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OF

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M. D.

191

MEDICAL TIMES July 1, 1917

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NEW YORK, FEBRUARY, 1918

Dr. T. D. Crothers.

The passing of Dr. Thomas D. Crothers, superintendent of Walnut Lodge Hospital, Hartford, Conn., removes from medical activity one of the best known physicians in the country, and the cause of temperance has received a decided setback in his demise.

Dr. Crothers, whose contributions frequently appeared in these pages, and who had graced the editorial board of this journal for a number of years, has long done yeoman work in the field of inebriety. He was one of the first men to promulgate the doctrine that inebriety is a disease and that it should be treated like any other disease. His work was scientific in the extreme, and he had gradually been able to demonstrate to the profession the soundness of his doctrines. Possessed of a most gracious personality, and with a broad learning, he made a place for himself in the country which will be very hard to fill. In his passing, the medical profession loses a most useful and efficient member and the world is decidedly poorer.

Round Pegs in Round Holes.

Surgeon General Gorgas is putting the round pegs in the Medical Reserve Corps into the round holes. He is observing the new officers and from these observations is placing them in the positions where they will be of the most value to the Medical Department of the army.

As nearly as possible specialists continue to follow their special lines. Men without well-defined specialties, but with an aptitude for certain work, are detailed to the great medical centers to perfect themselves in that work. Oral surgery, brain surgery, plastic surgery, orthopedics, venerology, dermatology, radiology and neurology are some of the subjects to which officers have been assigned for special training and some of the great hospitals and medical schools in New York, Boston, Philadelphia, Chicago, St. Louis, San Francisco and other large centers are being utilized.

Every medical man who enters the Medical Reserve Corps and makes the most of the splendid opportunities presented will be richer in professional experience and of more value to his clientele when the war is over. Far more important than this, however, is the knowledge that taking up his burden at this time will mean the accomplishment of his patriotic duty.

The Surgeon General is still asking for more members of the Reserve Corps. Thousands of medical men must yet be commissioned before the great armies to be raised will have a proper medical personnel.

On another page is published a blank which, if properly filled out and sent to General Gorgas, will start a physician on the road to duty.

Now is the accepted time.

And echo answers now.

The Doctrine of Labor and Materials.

The present business of the United States is war—war to exterminate autocracy and unrighteousness and to establish peace among the nations of the world.

The President has stated that the war can be won only if all the people of the country unite in a common purpose to defend our shores from aggression. No one group of people, or two groups, or three groups, can win the war. It can only be won by the united and continuous co-operation of every man, woman and child. The two Liberty Loan campaigns have demonstrated the willingness of our people to reach down into their pockets and lend their dollars to the Government. A plan has now been perfected which will enable all our people without exception to lend their money to the Government.

The plan proposed has, however, an object even more important in the present crisis than the actual money which it will produce. It is based on fundamental principles so simple and so direct in their appeal to our people that they cannot fail to meet with enthusiasm and universal response. These principles involve the saving of life. They involve pointing out to the citizens of the country that we cannot support a vast army in the field and a great navy at sea and at the same time spend the same amount of money we used to before the war, for all manner of articles which may be perfectly proper to buy in times of peace, but which are not necessary to the carrying on of the great war which we are now fighting.

We have got to get behind the Government, which is devoting its entire energies to waging a great warfare for freedom. This warfare requires putting men in the field and keeping them fed and clothed. It requires the production of ships, and shells, guns and rifles, motor trucks, horses, saddlery, aeroplanes, hospital supplies, food and a great variety of goods the production of which calls for vast industrial plants from one end of the country to the other, manned by millions of men and women who serve their country as effectively as our soldiers and sailors.

If the American people continue to require all the pleasant and comfortable luxuries which they consumed before the war they are making it necessary for these thousands of factories and shops, employing millions of men and women, to produce articles which do not help to bring peace a day nearer, when they might be devot-

ing themselves to the production of the necessary things which will help to bring the war to a victorious conclusion.

Both things cannot go on together. We have pledged the honor of our country and our people to fight this war to our last dollar and to our last man, if necessary. America does not break her word. The necessities of the war must be produced and must be produced quickly. The key to the situation, therefore, rests in the hand of the average man, woman and child in every State in the Union who can, by refraining from everything not absolutely necessary to health and efficiency, release strong arms to the production of materials of war and the support of our army and navy.

This is the philosophy of labor and materials. This is the lesson which must be immediately brought home to the people of America. This is the sacred gospel which underlies the campaign of the National War Savings Committee and the principle which the members of the War Savings Societies pledge themselves to follow and to induce others to follow, not for one day, or one week, but honorably, patriotically and persistently until we have fought this war and won it according to the highest traditions of our country.

Our fighting forces are formed of companies of soldiers and sailors banded together to serve their country. War Savings Societies will be formed of companies of savers banded together to save their country. For the success of our army and navy every company of soldiers in France, the crew of every ship, should have back of it at home a company of savers. As a united people, consecrated to the great task which lies before us, we cannot fail.

The Pulpit's Distortion of Medical Matters.

The newspapers, as moulders of public opinion, often muddle medical matters badly. The pulpit, that other moulder of public opinion, also unwittingly offends not infrequently.

The Reverend John Haynes Holmes, a clergyman noted for his consistent opposition to militarism, recently invoked a new argument against war which is so manifestly inconsistent and so obviously violative of the medical principles which are implied that it becomes the profession's duty to challenge his weird logic.

The reverend gentleman compared war to cancer, and declared that uncompromising pacificists were trying to abate the social disease known as war, just as medical scientists were trying to find the cure of that disease of the body known as carcinoma. Nobody, he said, thought of attacking the scientists, but all agreed that they were great benefactors. For like reasons, he declared, the pacifists should be regarded as saviors of a similar sort and should command the same affection.

The distinguished speaker complained in the course of his remarks that most people do not think. It seems to us that his sleazy logic convicts himself on this score.

War is invoked by society as a remedy against some social disease. Just now the disease is Germany. The pacifist is attacking a rather crude remedy, but he is not attacking the disease itself, as the medical scientist is attacking the problem of cancer. The institution of peace itself would not be a remedy for the disease Germany, or rather the political system that we know as Germany. It is a cruder and less efficacious remedy for social evils just at present than war itself.

The preacher's argument is not sound even when he proclaims the immunity against attack of cancer-research workers. When such workers bring forward an alleged remedy which proves to be unserviceable we attack the treatment and put it out of action, just as we did in the case of Beard's vaunted cure. The good intentions of the researchers give them no special privileges if they are found to be incompetent.

The "militant" pacifist must, if he would finally abate war, attack something besides dubious remedies. He must, like the medical scientists, attack the disease itself. Until he does this he cannot put himself in the same category as the physician. And he has not yet learned how to diagnose disease, like the physician, let alone treat it intelligently.

What complaint could the pacifist make, after all, if the people of Germany waged war against their own disease? Who would say that in that case war would not be a proper remedy?

There are gross evils in many countries against which radicals believe war—bloody war, if necessary—should be waged, and in which the pacifists, with their passion for human regeneration, should logically lead the hosts and operate the guillotines wherewith to behead the imperialists, land hogs, profiteers, property worshippers and capitalistic exploiters. These radicals believe that the remedy for war is more war, of what they consider the right sort—war to the death against the industrial enslavers of little children and against criminal statesmen with a gift for inspiring international hatreds just when home conditions themselves smell to heaven.

But the pacifists are quacks, not physicians; they are such very poor diagnosticians that they cannot distinguish a disease from a remedy; and were they to learn how to distinguish between these things we doubt very much whether the deliberately misled and outraged victims of the master classes in some countries of the world could hope for anything from them.

The Health of the Housewife and the Democratization of the Home.

Among the greatest casualties of our social life have been the killings of housekeepers. The wives and mothers who have been sacrificed in the American "home" make the deaths on the Western front look rather unimpressive.

We apologize at the outset for the employment of such terms as housewife, housekeeper, homekeeper, etc. No modern terms for the women who are now heads of families appear to have been coined.

There is a great deal of camouflage about labor-saving devices in the home; but some one has to operate them and the servant (another anachronistic term) question is growing more acute for reasons that are clear to all. There seems to be no salvation for the housekeeper, just yet, but the future holds a glowing hope, as we shall endeavor to show.

We still have with us, and she is found in apartment houses as well as in private residences, the handicapped housekeeper. Even our household furniture appears to be designed to make cleaning difficult. It is true that in many apartment houses there are no stairs and that many things are taken off the housekeeper's hands, but if she has children she is still physically handicapped, and if she has none certain unwholesome things are apt to happen to her psychically. How can she be saved even from the compromise known as the kitchenette?

In the few private residences left the housekeeper—even if only a quasi-housekeeper—hasn't a chance. She goes over the top several times a day and the passage of the years leaves her a sad wreck. She may be either a fat wreck or a thin one. There are three prevailing types of the wrecked housekeeper—the fat wreck, suf-

fering from suboxidation and *special* dietetic excess, the thin wreck, a victim of *general* dietetic deficiency (both also victims of bad cooking and hence of digestive perversions), and the wreck whose troubles are psychic and neurotic. It is hard to say which constitutes the most unwholesome type.

When these sad specimens of our "home" life escape to hotels they merely suffer further degenerative changes inseparable from that deplorable mode of living and fall still lower in the human scale.

As to psychic wrecks, it is relevant to advert here to the warped minds and spavined sexuality of these products of American life; their deplorable standards of life and "thought," and the fixity of their attachment to them, are quite the saddest of our social curiosities.

It would be entirely feasible to write a textbook on these types, so distinctive are they, and so specifically related are their disabilities to their mode of living.

The chief causes of these conditions are, of course, chargeable to men. Men force women to reproduce as far as possible the domestic relationships (not necessarily the same conditions) to which they—the men—were inured in youth by their mothers, who were the shadows of their husbands. The home, in other words, like the world at large, has been and still is a man-made institution. Yet we will say for the men that if they had to conduct the homes they would immediately move for reform. They do not at present realize what a frightful product of the masculine mind the home is, any more than they realize the nature of other social crimes that they still commit against women.

An interesting revelation of the way men's minds work when the housewife is the victim of their arrangements was recently furnished by a committee of the apartment house agents which drew up a set of tentative rules for saving coal. These weird Manhattanites proposed that the steam pressure be reduced between 11 a. m. and 4.30 p. m. Not only would this have resulted in freezing the women during the working hours, during which time the men would be comfortable in their offices, but it would have endangered the health of domestic employees and driven them to other fields, which movement is bad enough as it is. Moreover, if laundry work were impeded in this manner the linen would have to be sent out and no coal would be saved in any case.

Doubtless many men believe that the women have been hoodwinked by the gift of suffrage, and that they are ignorant of the fact that it is in no sense a symbol of emancipation but merely a device designed in part to adapt the old masculinized caravansary known as the home to the present-day political game, clinching incidentally, as it were, the well known status quo ante bellum. Have not the women themselves, in the course of the suffrage "contest" and "victory," been convinced that through their suffrage they are to safeguard the old type of home, which has been made to appear more sacred than ever?

A home of another type must be created and maintained because worth maintaining, and the suffrage ought to be used to this end in a manner contrary to what most men would wish just at present, in their archaic state. Fundamental reform in the interest of both sexes would seem to consist in service from two types of organizations, one to send trained and salaried workers into the new home at stated hours and at reasonable rates, the other to provide food and table service in commons and also in varying degrees of privacy, quality and cost, at well appointed district stations and in the home itself. This service should be a municipal one and should not involve profiteering as in the case of private corporations.

Sterility or Fitful Performance?

What is the truth about the alleged sexual peculiarities of literary geniuses? Long lists are submitted of gifted writers who had unusual sexual experiences, leading one to think that the prurient urge must be very strong in this class of human beings. Yet it is well known that such celebrities do not tend to procreate. If they are so goatish as we are asked to believe they ought to be procreators.

Reynold Webb Wilcox ascribes the low birth-rate among intellectuals to sublimation of the sexual energies into other channels; they are so interested in the things of the mind and spirit that they seek sexual gratification rarely as compared with other men.

But probably there is a difference between the sexual trends of mere highbrows, the so-called intellectuals, and of geniuses. Mere intellectuality does not ordinarily connote anything much beyond mediocrity, as gauged by the gods. The true genius may be known by the erratic character of his sexual life, whether married or free lance, whereas the activities of the highbrow are probably relatively continuous in nature.

At the same time it is true that as the interests of men become narrow and material, the sexual activities are apt to increase; they turn to sexual pleasure since life holds no other joy for them. Thus it has been noted among the industrially exploited that animal-like relationships flourish and the birth-rate runs up. This was especially observed in England when her brutalizing manufacturing system, founded upon the wealth accumulated in the slave trade, changed the home face of Merrie England. The evidence consisted in a relatively high birth-rate among the class which before its enslavement exhibited a moderate family growth.

The truth appears to be that the literary genius indulges in some wild orgies in the course of his sexual life, but they are fitful patches upon a wide experience; the highbrow lives only a relatively abstinent life and has a higher birth-rate than the literary genius, but a much lower rate than the commonplace man, who in turn has a lower rate than the victim of a vicious industrial system.

Our Filthy Booth Telephones.

As far as we know the telephone transmitter and the telephone booth are not, in general, subjected to rigid sanitary control, yet it would seem that there are few appurtenances of modern civilized life that should command more serious consideration in relation to the personal hygiene of the people, which we profess to wish to see cultivated to the utmost.

The operators at toll boards in clubs and similar places may be observed cleaning the mouth and head pieces used by them. We presume that the company supplies the operators with suitable solutions for the purpose. Yet a toll board may be used by only a few operators, whereas public booths are used by battalions. The variety of organisms contributed to a telephone booth by its multitudinous patrons is something fearsome to contemplate.

Droplet infection is a well established mode of disease communication. Imagine the number of droplets deposited upon a telephone transmitter in the course of a day.

The unpleasant odor that lingers about most telephone

transmitters has doubtless been noted by all medical observers; its source and origin involve no deep mystery.

The telephone booth itself must be a great harborer of able-bodied germs. Fresh troops must be brought to the front daily.

Would it not seem that our authorities could very well concern themselves more intensively with the sanitation of the telephone ear piece and transmitter and the telephone booth?

The Social Value of the Medically Sane Agitator.

We suppose that there is a disposition to regard the agitator now so much in evidence in public affairs as an emotional creature, and to conceive of the crowd as sober thinkers. That certainly seems to be the point of view of the press, though how sincere this attitude is one may well question. As a matter of fact the thing is exactly the other way round. We do not believe that any informed person will challenge the statement that the crowd—the mob—ever has been or ever will be a company of sober thinkers. It of course suits present press purposes to ascribe Socratic wisdom to our well-known masses, but this is merely amusing camouflage to the cognoscenti.

The agitator is of course always the thinker. This statement takes no account of the soundness of the agitator's thought. We are not concerned with that. His business is to think things out in some sound or supposedly unsound way and then get more or less intense emotional reactions from the crowd. Thinker is only another name for agitator.

It is true that the agitator in action—in process of emotionally baiting a crowd—seems capable of great emotional experience and expression. This is only the actor's art and he was in no frenzy when he formulated his philosophy or absorbed it from other thinkers and teachers. The crowd, on the other hand, never philosophizes, in action or out of action. The crowd works in factories and offices, in banks and department stores, in mines and on farms, during which time it is to all intents and purposes content, which, if it means anything at all, means having the desires limited by present joy, which is an emotional state and nothing else. At other times the crowd is at the movies, in church, or engaged in bibulous endeavors, the emotional appeal of all of which is self evident.

And the agitator continues to think after he has prodded the emotions of his crowd. The crowd goes back to its beer and sentimentality and continues to live upon its emotions.

The reason why the agitator is hated is because he is a thinker. Yet it is for this very reason that he should be held in high regard, no matter what his views. People who think constitute a very small group, and should not be subjected to social violence by malicious officials. Thinking aloud, naturally and independently, is the crime of the deposed university professor.

If a thinker is medically sane he should be rated as precious and converted into an asset, for most of his thoughts will be wholesome. Certainly he should not be penalized for no other reason than that his personality peeves us, that his thoughts run counter to our own or to the established order of things, or because he thinks at all. Punitive measures are still as ill-advised as they were in the days when Saint Paul faced the mobs on his missions and died an anarchist's death in the arena, because his teachings jeopardized the precious Roman state. To the authorities of his day Paul was an unsound thinker.

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

The Sex Radical and His Relation to His Brethren in Other Camps.

The radical of to-day is the conservative of to-morrow. So we are in the habit of saying, but a suspicion is growing upon us that the radical of to-day is the conservative of to-day. Take the men who are constantly talking and writing sex, and discussing all sorts of possible arrangements between men and women, and also the perversions and inversions—just consider these men for a moment and tell us if you know any people more disgustingly respectable? They always seem to have a curious passion for monogamy and general asceticism in their personal lives.

Popular fear of giving these exceedingly respectable people lots of rope is unfounded. The fear of these supposed Sex Huns is a good deal like the distrust on the part of the capitalist class and their retainers amongst the bourgeoisie of the socalled radical socialists. Have we not seen the revolutionary group in Germany pledging themselves that there shall be no German revolution to interfere with Germany's reaping of the harvest of her victories? Even Liebknecht's conception of peace is one which sees no reason why it should not be based on Teutonic success.

So in the United States we have witnessed the prominent socialists tumbling over each other of late in their efforts to remove any doubt as to their essential respectability—Spargo, Stokes, Russell, Walling and the rest of their colleagues.

The comical fear of the Board of Education that our high school teachers are disloyal anarchists is an amusing example of this misunderstanding of the radical. The members of the board seem to be like those groups of men who make it their business to take in deadly earnest every expression about the war, and who are invested with quasi-official functions empowering them to smell out disloyalty where only a *rational* patriotism exists.

All these witch-burners are wholly devoid of the sense of humor. If one examines the evidence in a trial like that of the high school teachers he will find a striking proof of this fact in the testimony of the chief inquisitor.

The interests of society are really safer in the keeping of these gentle radicals, so-called, than in the hands of the capitalists themselves. When a premier of France, himself a socialist, was confronted by a general strike, he called the strikers to the colors, thereby breaking it promptly and in a maner that no conservative would have thought of.

In the case of the radical teachers we have men seeking to make education vital, to break up static conceptions of life, and to build up strong character in the young. They feel their obligation to young lives as something great and sacred. Such men are the ones to trust most of all. They do some harm but produce a finer human product than the familiar manikin type of teacher. The discovery that we have such men in our educational system was a pleasant surprise to many who had supposed that the personnel of the teaching force in our public schools was hopeless. Resentment against their presence in the school system must be based upon a feeling that the young people in the schools must be carefully protected against progressive educators, not only because of a mistaken notion as to the stability of things social being menaced through such educators, but because our schoolboys are conceived of as a mass

of rather poor creatures not capable of evolving a citizenship of higher class than what the community has hitherto known.

All these feared elements among the people are alike in that they are to be less feared than our ultra-conservatives. It is not the sex radical who is nasty and an unsafe person to have around the young. We place our girls in the care of puritanical females whose subconscious minds are preoccupied with obscenity. We place our boys in the hands of men whose very respectability is an earnest of their unfitness to receive the trust. We place our dependent children in institutions where there are officials and attendants who construe the least display of the sexual endowment as vicious, and who resort to intimidation and the implantation of obscene connotations in the minds of these precious charges of the community as remedies therefor. Somehow or other we believe that these unfit custodians of the young are the ones to receive the sacred charge.

So at all points we are determined, seemingly, to continue to turn out citizens whose morals have to be constantly disinfected artificially, who believe that Havelock Ellis must be a roué and Bernard Shaw a devil in his own home town, to whom nothing is so painful as progressive thought, in whom respect and reverence for certain standardized things and ideas is instinctive and not rational and reflective, to whom Chauvinism seems the greatest of virtues, whose conception of the social order is that of a static thing, and whose attitude toward the lives and minds of the young is *radically* wrong.

There you have it—*radically* wrong. The conservative is a radical in a bad sense and the radical is a conservative in a good sense.

The radical would not destroy capital; that is being destroyed to-day by the conservative.

The radical would not smirch the minds of the young; that has been the business of the puritans for a long time now.

The radical would not instil anti-social concepts into the minds of the young; that has been thoroughly attended to by those conservative destroyers of civilization known as Kaisers.

Let us give rein to the sense of humor, which is only a sense of proportion which enables us to see the laughable paradoxes of the world, and observe absurdities as absurdities, even where they involve the shedding of blood. Let us put the deadly earnest Kaisers, as notorious for their humorlessness as for their conservatism, out of our lives forever. Let us break the old spell. Let us remove the curse that the malicious gods have put upon us.

Correspondence

The Navy Calls for Binoculars, Spyglasses and Telescopes.

To the Editor of THE MEDICAL TIMES:

The Navy is still in urgent need of binoculars, spy-glasses and telescopes. The use of the submarine has so changed naval warfare that more "eyes" are needed on every ship, in order that a constant and efficient lookout may be maintained. Sextants and chronometers are also urgently required.

Heretofore, the United States has been obliged to rely almost entirely upon foreign countries for its supply of such articles. These channels of supply are now closed, and as no stock is on hand in this country to meet the present emergency, it has become necessary to appeal to the patriotism of private owners, to furnish "eyes for the navy."

Several weeks ago, an appeal was made through the daily press, resulting in the receipt of over 3,000 glasses of various kinds, the great majority of which has proven satisfactory for naval use. *This number however, is wholly insufficient, and the Navy needs many thousands more.*

May I, therefore, ask your co-operation with the Navy, to impress upon your subscribers, by announcing, in addition to the above general statement, the following salient features in connection with the Navy's call:

All articles should be securely tagged, giving the name and address of the donor, and forwarded by mail or express to the Hon. Franklin D. Roosevelt, Assistant Secretary of the Navy, care of Naval Observatory, Washington, D. C., so that they may be acknowledged by him.

Articles not suitable for naval use will be returned to the sender. Those accepted will be keyed, so that the name and address of the donor, will be permanently recorded at the Navy Department, and every effort will be made to return them, with added historic interest, at the termination of the war. It is, of course impossible to guarantee them against damage or loss.

As the Government cannot, under the law, accept services or material without making some payment therefor, one dollar will be paid for each article accepted, which sum will constitute the rental price, or, in the event of loss, the purchase price, of such article.

FRANKLIN D. ROOSEVELT,
Assistant Secretary of the Navy.

War Activities

Surgeon General Gorgas' Report.

The annual report of the Surgeon General, U. S. Army, Major Gen. William C. Gorgas, for 1917, says:

"It may be stated in passing that recent events have further increased the regional distribution of our Army, and the Medical Corps now faces the sanitary and hygienic problems of a great modern war, staged with a European background, and under conditions unparalleled in the history of warfare." And he refers to the task the Army doctors have before them in these words in connection with the war:

"It is manifestly undesirable at this time to allude except in most general terms to the preparations made for this struggle by the War Department, or refer except briefly to the plans of the Medical Department for its very important part in the war, with its exacting responsibilities in connection with all that relates to the health, hygiene and sanitation of the enormously increased military forces of the United States, included in the Regular Army, National Guard, and National Army. The details of the important work mentioned and the medical history of the part taken by the United States in the great war will be properly a subject for future annual and special reports, and the means to secure this end have already been given careful consideration with the view that nothing of professional or historical value and interest may be lost. As evidence of the unprecedented expansion of the activities of the Medical Department of the Army, it can be stated that at this time there are more than 13,900 officers engaged in the work of the Army Medical Department, including officers of the Regular Medical Corps, and the four Officers' Reserve Corps—Medical, Dental, Veterinary and Sanitary—connected with the work under the direction of the Surgeon General of the Army. It is believed that at least 24,000 physicians will be included in the personnel of the Medical Department of the Army when full strength is attained."

The general health of the Army for the calendar year 1916 was "in all respects satisfactory." The mean strength of the entire Army was 176,803 for the year 1916. Its non-effective rate from all causes in the year was 24.26 per 1,000 and for disease alone, 20.55, both of which ratios were slightly lower than for the previous year, 25.22 and 20.85, respectively. The admission rate of the Army for 1916, was 858.87, as compared with 726.22 for 1915; the discharge rate was 15.22, as compared with 14.06 for the previous year, and the death rate was 4.39, as against 4.45 per 1,000 of mean strength. The mean strength of the entire Regular Army for the calendar year 1916 upon which the statistics contained in the annual report are based, was 110,454. The non-effective rate for the entire Regular Army for 1916, from all causes, was 26.99 per 1,000, and for disease alone 22.63, being slightly higher than for the previous year, 25.22 and 20.85, respectively, but much lower than the average of these rates for the decade, 34.99 and 29.65, while that for the year 1906 was 47.86 per 1,000 from all causes. The admission rate for the entire Army for 1916 was 726.45, as compared with 726.19 per 1,000 for 1915.

The death rate of the entire Army for 1916, from all causes, was 5.19 per 1,000, compared with 4.45 for 1915, which was slightly higher than the lowest mortality rate in the Army for

many years, 4.40 for 1914. The death rate from disease was 2.71 per 1,000 for 1916, as compared with 2.53 for 1915; the average for the decade was 2.94 and for the year 1906, 3.77. The discharge rate for the year 1916, from all causes, was 15.98 per 1,000 as against 14.06 for 1915 and 12.78 for 1914; while the rate for this year is slightly higher than for the two years previous, it was less than the discharge rates prior to 1910 when they ranged from 16.64 upward. The total losses of the Army from all causes—deaths, discharges and retirements—was 20.92 per 1,000 for 1916 and 18.03 per 1,000 for 1915; for the year 1914 the rate was 16.86, the lowest in the past decade.

Paratyphoid fever had been little known and rarely diagnosed and reported in our military service prior to the year 1916. Many such cases had undoubtedly been reported as fevers of undetermined causation. There were 410 cases of this disease reported in the entire Army—114 for Regulars and 296 for the National Guard. During the mobilization of the Regular Army and National Guard on the Mexican border and during the expedition into Northern Mexico, paratyphoid fever was recognized quite frequently, and in two forms, caused by distinct bacilli known as paratyphoid "A" and paratyphoid "B," the former being the causative agent in the very large proportion of cases. Vaccination against the disease was rigorously instituted with the result that several outbreaks of the disease in the Southern Department were immediately checked, all troops in the infected divisions being fully immunized against the disease. There were 410 cases of paratyphoid fever reported, 2.32 per 1,000 of mean strength, of which over 95 per cent. were of the "A" type. These cases were distributed as follows: The Regular Army furnished 114 cases, of which number 22 occurred in the United States, 91 in Mexico, and 1 in China. The National Guard had 296 cases, which, with the 22 for Regulars, made 318 in the year for the United States.

Regarding the prevalence of measles in the Army, General Gorgas says: "The occurrence of measles in epidemic form among certain organizations in camp on the Mexican border gave an opportunity for competent observers to investigate the disease under the conditions obtaining in the field, and led to the conclusion of a well-known authority that not only are measles epidemics preventable, but in the future they should be prevented not only in the field but also in barracks and recruit depots, the result being assured, if proper ventilation and other facilities are provided and attention given to the important matter of the prevention of overcrowding; to the prompt isolation of contacts, and to the careful segregation of the non-immune, all under rigid and repeated inspections by trained medical officers."

As to the prevalence of hookworm disease in certain sections of the country, the report states: "It has been shown, for example, that three regiments from different states of the South, consisting of approximately 3,400 men, contained individuals infected with hookworm, the percentage of those harboring the parasite being reported as 6, 32 and 54 per cent. of the total strength of the organizations. The American hookworm is prevalent nearly everywhere in the Southern States, and has been frequently found in our island possessions. The freeing of the population in Porto Rico from this demoralizing pest constitutes one of the most valuable pieces of scientific and economic work ever accomplished by a medical officer of the Army. More recently members of the Medical Corps, serving with commissions appointed for purpose of investigating the hookworm problem in the United States, have rendered important reports and contributed much to the general knowledge of the subject in this country."

The statistical tables show that the mean strength of officers was 4,734. There were 2,408 admissions, forty deaths, and 110.98 constantly non-effective from all causes, equal to ratios of 508.66, 7.76 and 23.44 as compared with ratios of 553.03, 3.69 and 23.57 per 1,000 for the year 1915. Forty-five officers were retired on account of disability during the year, making a rate for retirement for disability of 8.73 per 1,000, as compared with 3.69 per 1,000 for 1915.

The admission to sick report during the year 1916 for the entire Army (all officers and enlisted men, including native troops) is 726.45. For disease only the rate is 604.04, being slightly higher both among American troops and for the entire Army. This is probably accounted for by the increased rates for diorrhea and enteritis. For venereal diseases the rate for white troops was 100.75, a decrease over 1915; for colored, 147.10, which was slightly higher than for 1915. The rates in the Philippines for these troops were 155.91 and 246.56, respectively, which are lower for both races over the rates of 1915 in the Philippines, 177.08 and 258.76, respectively. The following were the principal causes of deaths, among officers and enlisted men. American troops, from external causes, with the number in each instance: Suicides, 63; drowning, accidental, 46; wounded in action, 36; homicide, 30; traumatism by other crushing, 29; traumatism by firearms, 24; and traumatism by fall, 13. Regarding the comparative healthfulness of the various countries in which American troops were serving during the year (Army transports being excluded), it will be noted that Alaska maintains the lowest admission and non-effective rates, 344.97 and 9.23 per 1,000 respectively; Canal Zone the lowest death rate, 3.99 per 1,000; China the lowest discharge rate, 13.63, the highest non-effective rate, 31.31, the highest admission rate, 890.24, and the highest death rate, 10.60. Alaska had the highest discharge rate, 21.48.

Among other subjects discussed in the report are camp sanitation, the punitive expedition into Mexico, the health of the cadets at the U. S. Military Academy, prevalence of special diseases among the enlisted men of the American troops and sanitation in the Philippines.

Medical Officers To Be Weeded Out.

The War Department has issued the following statement concerning medical officers:

"The Surgeon General of the Army has ordered that steps be taken for the elimination from the Service of all incompetent medical officers. In this category will be placed officers not fully qualified to perform their duties because of mental and physical incapacity, bad habits, or laziness. Officers assigned to duties that they cannot competently perform because of unsuitable previous training will be transferred and tried in other positions. If then unable to do satisfactory work they will be reported to the Surgeon General as unfit and sent before a board with a view to their discharge from service.

"Recognizing that a proportion of medical officers are not fully qualified to perform their duties because of physical disability, mental incapacity, temperamental unfitness, laziness, inability to command men, lack of education, or proper training, all division surgeons, commanding officers of base hospitals, and other medical officers having subordinates are directed to list those whose work has not been satisfactory. If mental incapacity is suspected, psychological examinations will be given to determine the fact. Systematic instruction in military hospital is recommended to remedy incompetency, due to poor training in the technique of professional work. The medical officers' training camps are relied upon to correct deficiencies other than professional incapacity.

"Medical officers who have been transferred will be given proper instruction in their new work, and will not be discharged from the Service until their superiors are convinced that they cannot become competent within a reasonable time. No action for discharge will be taken until they have failed in two lines of work, viz., the professional care of the sick and disabled and medical field work, the latter including camp sanitation, handling of men, first aid and transportation of wounded."

Lakewood for Convalescent Soldiers.

The Lakewood Hotel, Lakewood, N. J., has been taken over by the Government as a hospital for convalescent soldiers. The property is a substantial brick structure, contains 400 rooms and is considered almost fireproof. It has a power plant, stables, and a twelve-acre park, making it ideal for the purpose in view. The hotel will be remodelled to provide accommodation for from 3,000 to 4,000 patients.

A new base hospital will be built at Camp Mills, near Hempstead, L. I., less than 15 minutes from New York, at an estimated cost of a million dollars.

Rebuilding Wounded Soldiers.

Conferences are being held under the auspices of the Surgeon General of the Army to consider problems involved in caring for soldiers who may be returned from the American Expeditionary Forces unfit for further service, says the *Army and Navy Journal*. The plans contemplate provisions for the necessary surgical and medical attention by specialists; for reconstruction hospitals and curative workshops; for re-education; in the use of injured and artificial limbs; for vocational education or re-education; for occupational studies of industrial and agricultural conditions and for returning soldiers to employment in civilian life on a self-supporting and useful basis. Five divisions of the Surgeon General's office are represented in the conference to work out details of a plan of organization to be submitted to General Gorgas and, when it has received his approval, to the Secretary of War. These divisions are: The Division of Surgery; the Division of Military Orthopedic Surgery (seventy-five to eighty per cent. of military surgical cases are orthopedic); the Division of Surgery of the Head (eye, ear, nose, throat and brain); the Division of Neurology and Psychiatry (which deals with

mental and nervous functional disorders); and the Division of Special Hospitals and Physical Reconstruction, which will provide twenty hospitals for reconstruction work. Plans being made must also include provisions for some reconstruction work to be done in France with soldiers to be returned to duty and for others awaiting transportation to the United States where the special facilities for soldiers not returning to service will be located.

Promotion of Naval Medical Officers.

For the first time in the history of the U. S. Navy its medical department will have some rear admirals. The Surgeon General has that rank by virtue of his office, but a recently passed bill gives the medical department three admirals and Medical Directors George H. Barber and Edward R. Stitt have been promoted to the rank. They were selected by the President in recognition of their distinguished services.

Dr. Barber is a native of Massachusetts, and a graduate of the College of Physicians and Surgeons, Columbia University, New York, and entered the Navy as assistant surgeon in 1889. He is a specialist in tuberculosis and for several years has been head of the Naval Hospital at Las Animas, Colo. He has served many years at sea and has had service at training stations and hospitals both in the United States and in the Philippines. He was at one time in command of the hospital ship Relief on the Asiatic Station. His special work in tuberculosis led to Dr. Barber's selection to take charge of the Naval Hospital at Las Animas, the sanitarium for tuberculosis patients of the Navy. During his five years in charge there the institution has been enlarged from a capacity of 200 beds to accommodations of 760 patients.

Dr. Stitt is president of the Naval Medical School, Washington, and an authority on bacteriology, pathology and tropical medicine. He is a graduate of the University of South Carolina and received his degree of M. D. from the University of Pennsylvania. He was born in North Carolina, and entered the Navy as assistant surgeon in 1889. He was medical officer of the Nicaraguan Canal Commission in 1895. Later, while on duty at the Bureau of Medicine and Surgery, he took special courses in bacteriology at George Washington University. While cruising on the Hartford in the West Indies in 1899-1900 he continued his studies of tropical diseases. In 1905 Dr. Stitt attended the London School of Tropical Medicine, from which he received a diploma "with distinction," being graduated second in a class of forty. While commanding the Naval Hospital at Canacao he served as associate professor of medical zoology in the University of the Philippines.

In 1908 he was appointed to the chair of tropical medicine of George Washington University, and to a similar position in Georgetown University and in the Jefferson Medical College of Philadelphia. In 1911 he was naval representative of the Advisory Board of the Hygienic Laboratories of the United States public Health Service. In 1912-1913 he served as president of the American Society of Tropical Medicine. He is a member of the National Board of Medical Examiners.

American Army Surgeons Adopt Method of Continuous Treatment from Front to Base Hospital.

Plans for the care of American soldiers in France include a radical departure from former methods of treating wounded. A method has been formulated assuring each case continuous treatment from the dressing station on the fighting line through many hands to the base hospital.

This co-ordination has been worked out by Maj. J. M. T. Finney of Johns Hopkins University, Director of the surgery section. It does away with the more frequent examination of wound dressings which has been the method in other armies.

Divisional and regimental hospitals will unite to collect the wounded from trenches and No Man's Land. They will give temporary relief at dressing stations. From there wounded men will be transported to field hospitals. Later they will be shifted to evacuation hospitals—then to base hospitals. It is possible the field hospital may be eliminated later, owing to the rapidity of motor ambulance transportation between the front and evacuation hospitals.

Another departure is the standardization of splints. Plans for the care of the blind include instruction to begin as soon as possible after the wound has been received, experience in other armies having shown that quick treatment and instruction are most valuable. Personal instruction will be continued by the army until the blind reach the United States. Dr. George E. de Schweinitz of Philadelphia will be in charge of treatment of the blind, and also will direct head surgery.

American medical men have found most difficulty in obtaining an efficient litter for removing wounded from the trenches. The American expeditionary force has adopted French hammock litters, in which the wounded sit up.

Since it has been found that speedy treatment of wounds results in a greater saving of life, divisional ambulance sections have been mobilized to three-quarters of their strength. It is expected the resulting speed will almost cause a merging of the collection on field hospitals and the evacuation hospitals, where there are special operating rooms and special wards for special injuries. Up to this time only male nurses have been used at advanced hospitals, but the new American plans provide for female nurses there, the British and French having found them valuable.

There has been a great change in conditions since Spanish war days when, because most wounds resulted from bullets, it was found advisable not to operate quickly. Now most wounds are caused by shrapnel, which makes it advisable to operate as speedily as possible.

All the specialists have been grouped under the following sections: Head, muscles and joints, blood diseases, skin diseases, surgery, general medicine, *x*-ray laboratory and mental diseases. When it is determined that they are permanently unfit for further army service, wounded men will be returned to the United States. Ample hospital room is being obtained and seventeen hospital trains have been ordered.

The use of paper pulp fibre tissue for surgical dressings, compresses and bandages in war hospitals in France may result from a test soon to be made in a certain war zone hospital.

The enormous demand for cotton and linen dressings during three years of war has begun to cause difficulty in obtaining ample supplies.

Experiments in New York some time ago with the new fibre tissue are declared to have given results equal to either cotton or linen. A ton of the tissue, manufactured especially for a well known New York surgeon now in France, is on its way from Oregon to the war zone.

If experiments soon to be made here are successful, any quantity can be manufactured in France. As cotton, which furnishes the material for most surgical dressings, is not grown in France, the saving in ocean tonnage on this article alone would be highly important.

The new dressing, it is said, is not only as soft as the others, but can be manufactured more quickly and at much less expense.

An idea is being formulated to give more rapid and efficient care to desperately wounded soldiers just off the battlefield. The plan involves a chain, first, an "auto-chir"—a high speed hospital on wheels that can follow a battle wherever it goes; secondly, a fully equipped inland waterway hospital steamship working in conjunction with the "auto-chir," and third, a 300 bed hospital at Chateau d'Annel, located almost on the banks of a river connecting with the great network of canals and rivers crisscrossing the whole battle areas of France and Belgium.

The "auto-chir" is somewhat like a hospital train. It is composed of a squad of five automobiles in charge of a full staff of surgeons, nurses, orderlies, chauffeurs and auto mechanicians. One automobile is an operating room equipped with all the latest improvements for war surgery, another carries radio equipment for *x*-ray work; a third carries instruments and surgical appliances of every kind; a fourth carries the personnel and the fifth contains a number of emergency tents, beds and bedding.

With the maze of rivers and canals every few miles along the battle fronts the hospital ship will always lie within easy distance of the "auto-chir." Another set of surgeons, nurses and orderlies forms the staff of the ship.

Some of the prominent American physicians now in France are Majors George W. Crile of Cleveland, George E. Brewer of New York, Harvey Cushing and F. A. Washburn of Boston, Samuel Lloyd of New York, C. L. Gibson of New York, R. H. Harte of Philadelphia, Charles H. Peck of New York, F. D. Murphy of St. Louis, Marshall Clinton of Buffalo, E. D. Clark of Indianapolis, B. R. Shurly of Detroit, and J. E. Flint of New Haven.

Many of them have brought their own staffs, Dr. Peck having an entire staff of nurses and assistants who worked with him in the operating room at Roosevelt Hospital, New York.

A bill to be submitted to Congress in the interest of disabled soldiers has been worked out by representatives from the Surgeon-General's Department, the War Risk Bureau, the Federal Board for Vocational Education, the Department of Commerce and the Department of Labor.

It is understood that the Chamber of Commerce of the United States will co-operate in carrying out the Government's plan.

In framing the bill, Mr. Walker said, its sponsors have been guided by the experiences of the allied governments, who have had to deal with the problem for the past three years.

Commenting on the Government's plan a representative of the Chamber says:

"Everybody is giving thought just now to the question of shortage of man power when the war is over. The hospital surgeon may feel the paramount necessity of getting his patient well as quickly as possible, which may involve the amputation at the elbow of a splintered hand or wrist. But along comes the industrial surgeon, figuratively, and says, 'No, we will not amputate at the elbow. By treating this man's arm a few weeks longer we may be able to amputate at the wrist and allow him to retain that much additional leverage of the forearm. This man has to go back into industry, and we must conserve every muscle and organ we can for the sake of his industrial future.'

"That is the new viewpoint and that is the basis upon which men are being treated in the military hospitals at the front today. As the wounded men leave the base hospitals and are taken to the convalescent hospitals, every bit of spare time is used in the cultivation of the right attitude of mind of the patient toward his future, and curative workshops have been established in Great Britain and France in connection with the convalescent hospitals, so that the patients can be vocationally re-educated while they are being functionally rehabitated.

"The man may be disabled by having lost a limb or part of a limb—and be quite unable to follow the calling in which he had been engaged prior to the war. That means he has to be vocationally re-educated and equipped to make use of his maximum earning capacity under his disablement. But the functional rehabilitation has to come first. Injuries to limbs frequently mean that certain muscles and organs of the body have to be taught to operate in a manner totally different to the natural way in which they were used prior to the affliction. This all has to be taken into account and the two important methods of rehabilitation have to be applied as nearly as possible in unison, so that time shall not hang heavy upon the hands of the afflicted and he shall be enabled to learn as much as possible in the shortest available time."

First, Furthest and Bravest.

The Military Surgeon of June, 1917, called attention to the fact that the Medical Department, U. S. Army, was already first at the front; anticipating that more belated branches of the service might later lay an unwarranted claim to such enviable priority, as proved to be the case. It showed that large numbers of medical officers, enlisted men of the Medical Department and nurses were serving with the English and French in Belgium and France long before there were any other American troops on foreign soil; and that they suffered the first wounds, and achieved the sad distinction of the first deaths, at the hands of the enemy. This exposition of fact has just been confirmed officially by the Secretary of War, who, in his report for 1917, says: "Indeed, the honor of first participation by Americans in this war belongs to the Medical Department."

Since then the record of the Medical Department has continued its priority of glory. It has its representation in Italy, and through its ambulance service it is the only branch of the army flying the American flag on the battle lines of Macedonia. In its latest extension of its humanitarian frontier, a hundred medical officers are en route to Roumania for service.

Now comes the announcement that France has honored Ambulance Section No. 5, on duty with the French forces, with the first decoration for valor given any American military organization, the "fourragere." This rarely bestowed decoration, an aiguillette with a cord of the colors of the Croix du Guerre, is worn by all members of an organization twice cited in orders for extraordinary heroism.

The medical profession may well take pride in the fact that its representatives on the firing line have gone first, gone furthest, and been adjudged the bravest.—(*Military Surgeon*, Jan., 1918.)

The Biggest Loan Ever Floated Anywhere.

The third Liberty Loan will undoubtedly exceed in amount not only its two predecessors in this country but any single war loan or any other loan ever offered in the history of the world. The probable date of offering will be March 1st. These provisions, of course, are subject to such change as the rapidly changing conditions of war may warrant. No loan of such proportions can be successfully absorbed unless the entire nation responds to the offering and every citizen prides himself on the practice of self-denial that he may subscribe to the limit of his ability. The number of subscribers to the last loan has been estimated at 10,000,000. Proportionally for the new loan it must exceed 15,000,000, or contain one in six at least of all the men, women and children in the country.

Public Health

Health Centers of the City of Buffalo.

March 11, 1916, marked the beginning of an important epoch in the history of the Buffalo Department of Health. On this date the provisions of new ordinances went into effect whereby the ten city physicians then under the direction of the superintendent of poor for the city of Buffalo were automatically released from their positions and four city physicians were employed on full-time at $1,800 a year, under the direction of the commissioner of health. The city was at the same time divided into four health center districts with a dispensary in each. A health center, according to the Buffalo Department of Health, is a miniature health department located in one section of the city in order to bring its activities into closer relation with the needs of the people. There is a city physician in charge of each health center district with morning (9-10), afternoon (1-3), and evening (7-8) office hours. Sundays and holidays the office hours are 9-10 in the morning.

The program of reorganization of the Buffalo health department includes the maintenance of uniform standard records with a system of interchange between the department of health, the department of poor, and all social service organizations, and a central dispensary, in addition to the health centers. The equipment in all health centers includes, in addition to the city physicians, an attending medical staff, department of health nurses and a registrar for taking history and keeping records. The city physicians are not permitted to carry on private practice. In addition to their office work they make home visits and hospital calls, and supervise the admission, care and discharge of city cases in the city hospitals. The scope of the work includes:

1. A well-baby clinic, where their nutrition and well-being is supervised and mothers are instructed.
2. A sick-baby clinic, where sick children are cared for, malnutrition cases being referred to the Children's Hospital and University of Buffalo service.
3. A nose and throat, eye and ear, and skin clinic.
4. A medical clinic, where all cases are treated except venereal diseases, which are referred to the Urologic Hospital, and tuberculosis cases, which are referred to the Tuberculosis Association Dispensary or the Municipal Hospital for treatment and disposition, according to their character, incipient cases being diverted to the J. N. Adam Memorial Hospital at Perrysburg, N. Y.
5. A prenatal clinic, where expectant mothers are guided through pregnancy, to secure healthy children and safe confinement.
6. A free dental clinic, with full-time service staff for school children in two health centers (in addition to the city's free dental service at the University of Buffalo.

The health centers are further utilized as distributing centers for milk and eggs, sputum napkins, etc., for tuberculosis cases, and for supplying the profession with laboratory outfits for the examination of pathological secretions, blood tests, etc., and which include Wassermann, Widal, paratyphoid, tuberculosis, pneumonia, diphtheria and gonorrhea examinations, and, finally, for the distribution of typhoid, diphtheria, and antitetanus serums, etc. Complaints relative to nuisances and offense are received and transmitted to the general office for suitable action.

The system includes a Urologic Hospital, with outdoor service, maintained at the Municipal Hospital, and supervision of midwives and their confinement cases. Both these progressive preventive activities are unique with the Buffalo Department of Health.

The Urologic Hospital (opened in 1914, prior to the health centers themselves) is maintained at the Municipal Hospital, with forty-six beds and an outdoor service. Medicine (excepting salvarsan, to those who can pay) and services are free to all classes, and the hospital is open to the profession for private cases, subject to approval.

The supervision of midwives and their confinement cases includes lectures, course of instruction (individual when indicated), the actual scrutiny of technic and skill in at least one obstetrical case, and the routine examination of surgical bags and outfits. Every confinement attended by midwife is investigated and the condition of mother and child overseen. with particular reference to the prevention of infective inflammation of the eye and the prevention of blindness. When eye shows inflammation or irritation a bacterial smear is taken and subjected to microscopic examination, and when infection is found to be present, an eye and ear specialist of the department take charge of the case until recovery, or it is sent to

a suitable hospital. Cognizance is taken of other pathological conditions and physical defects, and when present they are attended to in accordance with the indication. This progressive work has been very highly commended by authorities and particularly by the National Association for the Prevention of Blindness, while the actual operations and methods are made the subject of study and observation by medical men, nurses, and social workers for many places.

Experience shows that the health center brings the department of health in close relation with the people and elicits a responsive attitude. It secures the reporting of contagious diseases and lessens their spread. Morbidity and mortality are greatly influenced. Duration of sickness is lessened and restoration to health promoted by securing selective and appropriate hospital and other care for the sick and by following up cases of convalescence after institutional treatment. Prenatal and child welfare work makes for better individuals, and hospital patronage by pregnant women is increased. Traditional prejudice and distrust of hospitals and dispensaries is offset and hospital care of contagious cases increased. The system of uniform records and interchange prevents duplication of work and imposition by the unscrupulous.

The success of these centers is largely due to the invaluable assistance and cooperation of the Charity Organization Society, the District Nursing Association, the Tuberculosis Association, the Infant Welfare Milk Stations, and other organizations, and to the unselfish interest and industry of the public health nurses, whose valuable services should be extended.—(*Modern Hospital.*)

Venereal Disease Control in Rochester.

A unique method of keeping venereal disease patients under dispensary treatment was explained by Dr. George W. Goler, health officer of Rochester, N. Y., at the recent meeting of the American Public Health Association in Washington. The plan worked out in that city calls for regular, periodic visits at the Department's clinic by each patient. He is told upon leaving, when he is expected to come again and if he does not appear a written notice is sent to his house stating that unless he presents himself immediately for further advice and treatment, he will be visited by a police officer. In case the patient still persists in neglecting treatment a warrant for his arrest is sworn out, he is haled into the local police court, and committed to the care of the health officer for an indefinite period.

This close cooperation between the Health and Police Departments is one of the most progressive and effective means yet employed for the control of this class of diseases.—(*Social Hygiene Bulletin*, October, 1917.)

The Rockefeller Health Researches.

The third annual report of the Rockefeller Foundation, the International Health Board (known previously as the International Health Commission), deals with the year 1916. The general summary, which precedes the details of different States and countries, shows that in addition to ankylostomiasis, malaria and yellow fever have been dealt with, and this would seem to indicate that the board is prepared to tackle all tropical disease where the necessity arises. As regards the first of these scourges, ankylostomiasis, it is stated that active measures to control and prevent the disease are now in operation in Kentucky, Louisana, Mississippi, North and South Carolina, Tennessee, Texas and Virginia; in certain West Indian islands—Antigua, Grenada, St. Lucia, St. Vincent and Trinidad; in British and Dutch Guiana, Costa Rica, Guatemala, Nicaragua, Panama, Salvador, in South America; and in Ceylon and Siam in the East. Such widespread work, properly controlled as this is, and with no lack of funds to support it, is bound to do good, and, though remarkable results cannot be looked for in a few years, nevertheless results will come, all in due time. To ensure this, permanency of the work is essential, as otherwise matters would quickly drift back. As many tropical maladies are insect-borne, study of the habits of the insects concerned is essential, and engineering works, large and small, may be required to abolish their different breeding grounds. The importance of collective investigation and organized campaigns in such a task is manifest, and it is here that the great value of the efforts of the International Health Board lies. The report describes fully the means adopted in the fight against ankylostomiasis. Of great interest also is the work of the Commission appointed by the board to inquire into the problem of yellow fever centers in South America. The report states that the only endemic center of the disease in South America at present is Guayaquil, Ecuador, though certain sections of Colombia, Venezuela and the adjacent West Indian Islands are also under suspicion and require close observation. The eradication of the disease, with this knowledge as a guide, is feasible. The report suggests that Mexico and West Africa should similarly be examined. Experiments upon the control of malaria have also been commenced, and these will be extended in due course. Further, a new school of hygiene and public health has been established in Baltimore by the Foundation. Three main purposes will be served by the new school: to furnish trained men on whom the board may draw; to serve as a training center to which students from other countries may be sent for instruction; and to provide a laboratory for solving scientific problems which arise.

The Etiology of Pellagra.

In Bulletin No. 106 of the Hygienic Laboratory of the United States Public Health Service appear some very important studies on pellagra. In the first, on tissue alteration in malnutrition and pellagra, Dr. Sundall comes to the conclusion that from a pathological standpoint there can be no objection to the classification of pellagra along with rickets, scurvy, and beri-beri as dietary diseases; that no organisms which can be regarded as specific etiological factors have been found in the tissues, while the pathological changes show no characteristic cell alterations apart from those resulting from malnutrition, and that the degenerations that occur in the nervous system, both in a series of badly fed animals and in pellagrins, are similar, and readily explained by the exhaustion theory of Edinger, Meyers and others.

In the second paper Dr. Francis relates cultivation experiments with the blood and spinal fluid of pellagrins. He states that the results were negative; the cultures either remained sterile or an occasional tube showed a growth which was evidently a contamination. His extensive feeding and inoculation experiments also were negative. "Of the 94 animals reported upon, 54 are living and 40 are dead; 18 of the latter died of tuberculosis; 10 died of acute peritonitis following peritoneal injection; 2 died of cerebral abscess following cerebral injection; 1 died of oesophagostomum; 1 female died in labor; while 8 died from causes which could not be determined at the autopsy." The survivors, with one exception, showed no indications even suggesting pellagra. Dr. Francis's work thus furnishes no support for the view that pellagra is an infectious disease; these very accurate and exhaustive studies would seem to indicate a deficiency origin akin to that of scurvy, beri-beri and rickets.

Society Proceedings

American Proctologic Society.

At the nineteenth annual meeting of this society held in New York, the following officers were elected: President, Jerome M. Lynch, New York; vice-president, E. H. Terrell, Richmond; secretary-treasurer, Collier F. Martin, Philadelphia; executive council: Alfred J. Zobel, San Francisco; Jerome M. Lynch, New York; T. Chittenden Hill, Boston, and Collier F. Martin, Philadelphia.

The next annual meeting will be held in Chicago, June 10-11, 1918.

Dr. Zobel in his address on "The Place of the Proctologist in a Diagnostic Group" called attention to the fact that but few of the undergraduate medical schools give any adequate instructions in enteroproctology by qualified men. In sharp contrast to this, it is noted that in every postgraduate medical school in the country there is a department of rectal and colonic surgery. Today is the day of the specialist. With more knowledge and longer experience the specialist better realizes the close relationship existing between his particular field and all the other parts of the body. Among progressive men there has arisen a movement to form what is known as "diagnostic groups." Group diagnosis is not a new idea. It has been used for years in the postgraduate schools, which are the only institutions possessing a staff of clinicians in every specialty of medicine and surgery. The present movement is simply an elaboration and an extension of the original idea.

Every diagnostic group should include specialists in every branch. In it should be an enteroproctologist with training and experience sufficient to warrant the interpretation of his findings being considered of some value.

It is the high-class men among the various specialists of medicine and surgery who best know the value of, and mostly insist upon the need for ano-recto-colonic examinations. They are the ones who best understand that through long and varied

experience, skill in the use of the illuminated pneumatic sigmoidoscope, and ability to correctly interpret what is seen, the entero-proctologist is the one who should be relied upon to do this part in the diagnostic scheme.

Adult Rectal Prolapse.

Ralph W. Jackson, of Fall River, Mass., discussing this subject, mentions two sharply contrasting cases. The first was operated four times; extensive regional cauterization resulting in recurrence; posterior rectopexy resulting in recurrence; amputation, resulting satisfactorily as regards anal prolapse, but leaving a very large posterior vaginal hernia, which was promptly cured by cul de sac closure with sigmoid-utero-ventral wall suspension. The second, and less favorable, case was promptly cured by one operation identical with the final operation in the first case. The pelvic floor as a support depends on the sufficiency of four factors. The pelvic fascia is variable in strength and attachments, varying the depth of the peritoneal cul de sac. The strength of the levators and their uplift is not a constant thing. The anal and vaginal orifices may be guarded by sphincters, peri-vulvar muscles, a perineum and levators which are imperfect through trauma or atrophy. An amount of adipose padding about these structures is essential but often lacking. The rectum has imperfect support above the pelvic floor and its anterior wall none at all. Prolapse begins here from external pressure, or begins below as anal protrusion, but eventually the prolapse contains a hernial cul de sac. Regional cauterization is inadequate to meet any such faults. Posterior rectopexy does not support the primarily offending part. Amputation removes the troublesome part but does not correct the faulty factors which may allow recurrence per anum or per vaginam. Cul de sac closure, though a difficult operation, goes far toward such correction, and suspension helps. The operation of first choice for these very troublesome prolapses is cul de sac closure through the abdomen, plus some form of suspension, to be followed and supplemented, if need be, later by amputation or perhaps some plastic work on the elements of the pelvic floor.

Relation of Hemorrhoidal Disease to the Health Balance.

In discussing the "Relation of Hemorrhoidal Disease to the Health Balance" William M. Beach of Pittsburgh, summed up as follows:

1. The deleterious effect upon the patient's mind by increasing his irritability and making him anxious and morose.
2. The many reflexes coincident with ulcerated large or small type of hemorrhoids.
3. The influence upon the so-called vegetative functions of the body and intimate associations with diseases of the heart, lungs, liver and kidneys.
4. The refractory or retroactive relationship in most cases of constipation.
5. The tendency of neglected cases toward infections and cancer.

The Principles Underlying the Clamp and Operation For Internal Hemorrhoids.

W. Oakley Hermance, of Philadelphia, called attention to the purpose of this form of operation.

1. To remove actual piles, or pathology.
2. To support relaxed pile bearing tissue and mucous membrane. After giving minute details as to his technic he insists that only just enough tissue be removed to care for the pathology, being sure that columns of mucosa and skin be left between the escharo, thus preventing any undue contraction of the rectal outlet. Unless the tissue included in the clamp is excessive it is not cut off but is destroyed by the careful application of the cautery.

Care is taken that multiple strips of wet gauze are placed under the clamp to prevent undue radiation of heat to the surrounding tissues. Careful placing of the clamp, thorough cooking of the included tissue combined with the crushing produced by the clamp is depended upon to prevent such a complication as hemorrhage. After all danger of secondary hemorrhage has passed the insertion of a gloved finger will overcome the tendency to contraction.

Original Research Work on Pruritus Ani.

Dwight H. Murray, of Syracuse, read his seventh annual report on original research work in pruritus ani. He said that he is working with Parke, Davis & Co., for the perfection of a standard stock vaccine that can be used by anyone without the trouble to make cultures. He has used some of this stock of polyvalent strain from eight successfully treated patients, and the patients on whom it was used seemed to improve. He has used it only one month, therefore full judgment must be suspended until it has had a longer trial.

During the past year he found the patients all getting worse at about the same time and finally found that a laboratory worker had been deceiving him as to the strength and kind of vaccine; any kind of bacteria were used and few, if any, streptococcus fecalis. The laboratory worker resigned shortly after this and on getting the work in the hands of a proper man all went well again.

Dr. Murray reported that the work of the past year had still more strongly proven the correctness of the bacterial (streptococcus fecalis) infection theory as the etiology. His conclusions of the work are:

1. Conclusions of former years are confirmed and most of them are strengthened by experience of the past year.
2. The troubles I have had with the laboratory worker, as shown herein, give proof that the benefit received by patients, following the use of streptococcus fecalis vaccine, is not a coincident.
3. Increasing proof that if rectal pathology is present with streptococcic infection of the anal skin, an operation will not cure the pruritus ani.
4. Increasing proof that if rectal pathology is present without a streptococcus infection of the anal skin, an operation will cure the pruritus ani.
5. Continued proof that there may be complicating infections of the anal skin, in pruritus ani, by staphylococcus or B. coli.
6. Having published six years of research work, taking into account the report of physicians in this country and abroad who have confirmed his findings as to the skin infection, he feels justified in now claiming that the etiology of pruritus ani is a skin infection and that the streptococcus fecalis is the usual bacterium.

Adenomyoma of the Rectum.

Frank C. Yeomans, of Columbia University of New York, said his interest in adenomyoma is due to the following case which appears to be unique:

Mrs. V., French, aged 37, the mother of two healthy children, was seen in consultation in September, 1916, for rectal hemorrhage and pain. The important points of her history were pulmonary tuberculosis (?) six years before, cured; menses painful, the flow diminishing; always constipated until three years ago. Then occurred attack of diarhea lasting five months, and thereafter intermittent attacks. Past year ten or twelve movements daily, containing blood and mucus. Pain over sacrum is aggravated at menstrual period and with the diarrhea.

Physical Examination: Pale but well nourished woman, weighing 142 pounds. Wassermann of the blood, negative. Urine normal. Chest and abdomen negative.

Rectal Examination: Three and one-half inches up on anterior rectal wall, just above cervix uteri, finger feels a hard, fixed, fairly tender mass, the limits of which cannot be defined. Proctoscope shows a superficial ulceration, size of a quarter, at recto-sigmoidal juncture. This is red, clean, and bleeds freely on contact. Vaginal examination negative except in posterior fornix was felt the same mass apparently the size of a guinea-hen's egg.

Operation, Sept. 26, 1917. Left rectus incision. No growths were found in liver or other abdominal viscera. The tumor was located in anterior wall of sigmoid just above its juncture with the rectum and extended down two inches on rectum, cervix uteri and posterior vaginal wall. Lower third of sigmoid was mobilized, including small portion of posterior wall of uterus and its cervix, and superior hemorrhoidal artery was ligated. Then the abdominal wound was closed and in lithotomy position the operation was completed by a typical Genu-Tuttle extirpation of the rectum, including the posterior vaginal fornix. Patient reacted promptly from the immediate shock of the operation. Bowels acted on third day and union of sigmoid to peri-anal skin was primary except at one spot, which soon granulated. Patient left hospital in three and a half weeks and is now well, having normal anal sensibility for bowel actions, which occur once or twice daily with normal control. Vaginal and rectal examinations show no abnormalities.

Interest in this and similar tumors in this location centers in their

(a) Origin. Suggested origins are uterine mucosa, Wolffian ducts and "embryonic rests persisting from the fusion of Müller's ducts." The author's case was clinically an in-

testinal growth. Dr. James Ewing, after careful study, reported "the most likely origin is from superfluous material derived from that portion of the lower gut which continues on in the embryo to the bladder and allantois, and which normally atrophies. Persistence of a portion of this segment would furnish a source of smooth muscle and intestinal epithelium. I do not think the tumor is of Müllerian origin."

(b) Symptoms. Varying with the development and site of the growth the symptoms would be: obstructive, dysenteric or neuralgic.

(c) Diagnosis. Tumor imparts a rather characteristic feel. Apt to be mistaken for infiltrating, inoperable malignant growth.

(d) Prognosis. Histologically it is benign. Clinically it may be malignant from the symptoms to which it gives rise, or actually undergo malignant change.

(e) Treatment. Surgical removal at the earliest date possible. The abdominal route is preferable but if tumor is at recto-sigmoidal juncture a combined operation will probably be necessary for its removal, as was successfully done in the writer's case.

Pellagra, the Pellagrous Intestine and Peri-Colic Veils.

John L. Jelks, of Memphis, Tenn., said pellagra seldom develops in sanitary and screened homes, and believes that sanitation, isolation and the elimination of raw vegetables as a diet and effectual screening will control pellagra. He referred to the fact that the negroes and poor whites in his section have more money, and more to eat and a greater variety of diet than they ever had, yet that pellagra is increasing rapidly in the outlying districts about Memphis, though it seldom extends over into the sewered and screened section of the city proper. The speaker referred to a recent ordinance that had passed in the City of Memphis requiring doctors to report all cases of pellagra and to exercise the same precautionary measures in these as in cases of typhoid fever.

Idiosyncracy to Quinin and Urea Hydrochloride.

Collier F. Martin, of Philadelphia, reported a case of toxic symptoms appearing in a patient from an injection of 3 m. of a 10 per cent. solution of quinin and urea hydrochloride. The symptoms complained of by the patient were swelling of the hands and feet, and numbness of the extremities. For a few hours there was some difficulty in respiration, associated with a tendency to fainting and some nervous perturbation. Later there developed an urticarial rash, covering the entire body, associated with intense itching. The attack subsided in about two days, leaving the patient with no alarming symptoms. The patient has had two previous experiences, and certainly should have informed her physician of her susceptibility. The case is cited simply to note one of the complications which may occur when using this drug.

The Non-Surgical Treatment of Splanchnoptosis.

Without going deeply into the etiology, pathology and symptoms of diagnosis of splanchnoptosis, Rolla Camden, of Parkersburg, W. Va., called attention to the necessity for treatment first along conservative lines of medicinal personal and mechanical aids in this condition rather than the surgical treatment usually offered. Normally, the viscera are held in place by their respective supports, and intra-abdominal pressure, these being aided by proper poise of the body. In splanchnoptosis the poise is bad, with the resulting loss of intra-abdominal pressure and of supporting visceral attachments.

Splanchnoptosis divided into simple and complex: Simple when there are no restraining adhesions and the organs are returnable to their normal positions; complex (extravisceral) when they are retained out of place by adhesions and are not, therefore, returnable to their normal places. Our endeavor should be to restore viscera to their normal places and maintain them there. This is to be accomplished by personal efforts of the patient by correction of posture, certain abdominal exercises, massage, vibration and hydrotherapy, and medical treatment as indicated after gastric and enteric analyses.

Other means are external or mechanical, such as shoulder braces, abdominal supports, corsets, etc., *modified to suit the patient* and raising foot of the bed. Attention is called to the difficulty of obtaining proper and constant support to thin individuals with small abdomin and prominent hipbone, with suggestions for modifying the usual mechanical aids offered.

Diagnosis and Treatment

Artificial Sunlight.

Within the last few years the therapeutic value in surgical tuberculosis of exposure to sunlight has become established, owing a good deal to the practice of Rollier of Leysin. Except in southern climates, however, or those of the high Alps, where the sun shines strongly throughout the year, winter causes an inconvenient interruption to the treatment, which generally needs to be of long duration. Accordingly attempts have been made to substitute for the sun's rays, when absent, an artificial light, employing until recently that furnished by the mercury-quartz vapor lamp. The results have, on the whole, been inferior to those obtained by natural heliotherapy, and in several communications lately the carbon arc light is mentioned as being preferable, it is conjectured as exerting greater penetrative power. Some workers at the Finsen Medicinal Light Institute, Copenhagen, have reported (*Hospitalstidende*, 1917, Nos. 19, 20) on the subject.

Reyn and Ernst summarise their experiences as follows: (1) The carbon arc light can satisfactorily replace the sun-bath; (2) light alone without other clinical means can cure surgical tuberculosis; (3) light baths are a valuable mode of treatment in lupus; (4) the carbon arc light is better for the purpose than the mercury-quartz, and should alone be used whenever possible. The varieties of surgical tubercle treated comprised lupus, favorable results being claimed in cases resistant to other measures alone, and tubercle of lymphatic glands, of bone and joint, of the peritoneum, and of soft tissues. The last-named lesions responded best. As a rule, ordinary surgical measures seemed to be combined with the light treatment, which was not directed only to the site of disease, but generally to the surface of the whole body. Other workers (Mol in Holland and Collin at a Danish sea bathing hospital) supplemented the carbon arc illumination with ordinary incandescent lights, claiming that the higher temperature obtained increased the skin reaction. As in natural heliotherapy, pigmentation is deemed a favorable sign. Seventy-five amperes are mentioned as a suitable strength of current. With the winter months upon us, and at a time, too, when tuberculosis of all kinds, unfortunately, is rife, it might be well for this form of treatment to be tried here more than is at present the case. Little more than a year ago, indeed, the number of therapeutic mercury-quartz lamps in this country could be counted on one's fingers.—(*Lancet*, Nov. 10, 1917).

War Edema.

Under the name *Das Kriegsödem* (war edema) great attention is being paid at present in the German medical journals to a peculiar disease which seems to have become widespread throughout Germany during the present year. The disease has broken out not only in numbers of the camps occupied by prisoners of war, but also in the large towns. Maase and Zondek (*Berl. klin. Woch.*, No. 36, 1917) give an account of the disease as they have seen it in Berlin. The first cases occurred in January, 1917; males above the age of 40 years have been almost exclusively the sufferers. No noteworthy premonitory symptoms were observed, but suddenly great edema developed, especially of the lower limbs. The face and scrotum were often affected also, and in a small number of instances ascites and hemothorax occurred. There were no cardiac symptoms, and the urine never contained any albumin. As soon as the patient was put to bed a very marked diuresis at once began, and the edema quickly disappeared. Remissions and recurrences were fairly common.

The composition of the edema fluid in these cases had been compared chemically with the fluid effusions in renal disease and obstructive conditions such as hepatic cirrhosis. The chief difference found was the high ammonia figures in the *Kriegsödem*, as contrasted with the two other conditions. The pulse rate was markedly slowed during the disease, and examination of the blood gave, as a rule, a red count of three to four millions. This condition of anemia it was thought might probably be ascribed to hydremia. The occurrence of diarrhoea was fairly common.

The authors, in agreement with others, consider the cause of the disease to be underfeeding, especially the diminished quantity of fat. They suggest that toxic products of albuminoid metabolism may cause damage of the endothelial lining of the blood vessels, and so lead to edema. The high residual nitrogen and ammonia values found in the blood, urine, and edema fluids were considered to be evidence in favor of this hypothesis. By giving three patients 100 grams of fat daily for a week the authors were able to cure the disease completely without rest in bed or any other remedial measure. Another

factor suggested as of etiological influence is the amount of fluid ingested. Owing to the changed food conditions most of the sufferers had been taking a more watery diet than normally in the shape of soups, turnips, and so on. The regulation treatment of the condition consists of rest in bed until all swelling has disappeared, diminution of the daily fluid intake, and bettering as far as possible of the diet.

Schiff (*Muench. med. Woch.*, No. 22) states that the disease appeared in Vienna with great suddenness. He gives the usual pulse rate as from 42 to 56, and states that the amount of urine passed daily during the stage of recovery was commonly 3 to 4 litres. He suggests that this purely war disease has obvious similarities with beri-beri and other diseases depending on failure of vitamines. Numerous authors have described the same disease as it occurs in the camps of prisoners of war, pointing out clearly its cause and the means that may be taken to remedy it when there is the will to do so.—(*Brit. M. J.*, Oct. 27, 1917.)

Typhoid Fever and Diphtheria in Children.

In Typhoid Fever, the diagnosis in children is very often a matter of considerable difficulty. This is particularly the case in private practice, in which it is not always possible to rely with certainty upon the temperature chart being kept correctly. The swelling of the spleen is often late in occurring and not very definite, whilst the Widal test is not so clearly positive as in later years of life. It happens, therefore, that typhoid fever in children either escapes being diagnosed altogether or is only recognized at a late stage. It would be of very great advantage to be able to use a specific test which would at once determine the presence or absence of typhoid fever, especially in the case of a child when a diagnosis often remains doubtful in the presence of a prolonged febrile period which may quite possibly be due to tuberculosis. A test which would eliminate at once and with certainty typhoid fever, would be of very great value.

In Diphtheria, diagnosis is, as a general rule, easy, doubtful cases being definitely made certain by bacteriological methods. There are, however, some cases in which uncertainty remains, such as a suspicious rhinitis, or when the culture from a swab contains crowds of other micro-organisms, especially B. Hoffmanni, which interfere with the recognition of the B. diphtheriae. It sometimes happens that a swab has been taken after antiseptic applications of one kind or another have been made to the throat, with the result that growth of the B. diphtheriae is inhibited. Under such circumstances, a specific reaction would be of very great value.

L. Jeanneret, of Lausanne, believes that such tests can be prepared from cultures of B. typhosus and of B. diphtheriae, by using the same technique as in the preparation of tuberculin. Sterile substances are obtained in that way in carbolized glycerine, each of which contains the specific toxin of these bacilli.

These solutions are used for intradermic injection, 0:10 cc. of various strengths—1/10, 1/100, 1/1000 being given in that way. In the subjects of typhoid fever, and probably, too, in those who have previously suffered from that disease, a specific reaction is obtained which, like that of tuberculin, shows itself as a maculo-papule or as a small button of induration. A like result is obtained in the case of diphtheria.

So far Jeanneret has found the reactions to be strictly specific. He has named these two extracts, *typhin* and *dyphtherin*, in analogy with their close congeners, tuberculin and luetin. The results obtained up to the present have been, he considers, of sufficient interest to warrant the preliminary short account, thus securing priority for his investigations, but definite conclusions can only be drawn up after a long series of trials. Reactions of this kind in infantile diseases, in which diagnosis is always necessarily a matter of some difficulty, have considerable value as a complement to the clinical examination as well as to laboratory procedures.—(*Revue méd. de la Suisse rom.*, October 1, 1916.)

The Treatment of Hyperthyroidism.

Grier divides cases of hyperthyroidism into four groups: (1) Simple hyperthyroidism, or a persistent exaggeration of the physiological hyperthyroidism which occurs at adolescence and is occasionally seen in adult life during the menstrual period or during pregnancy; (2) acute exopthalmic goitre; (3) chronic exophthalmic goitre; (4) hyperthyroidism developing on an old goitre, either hyperthrophic or cystic. In the first group of cases operation is not only unnecessary but absolutely contraindicated. The author claims 100 per cent. of cures in this type of hyperthroidism by *x*-ray treatment. Medical treatment is successful in the majority of such cases; *x*-ray treatment is satisfactory in practically all of them. In the second group, *x*-ray treatment is the most satisfactory; medical treatment is inadequate and surgery unnecessary. These are the cases of exophthalmic goitre in which the patient is acutely ill, and in which the symptoms are gradually but progressively becoming worse. Out of 22 cases of acute exophthalmic goitre the author treated by *x*-rays 20 were discharged as cured. In the third group the choice lies between *x*-ray treatment and operation. The *x*-ray treatment of these cases is apt to be slow, but there is not so much danger in producing a subsequent hyperthyroidism as by operation. The final choice of treatment in this class of chronic case will depend largely on individual circumstances. In the fourth group, where hyperthyroidism develops in an old goitre, *x*-ray treatment is only palliative. The danger of producing myxoedema is also greater here, and the proper treatment for these cases is surgical. As a whole the two factors which appear to have the greatest bearing on the prognosis under *x*-ray treatment are the length of time the condition has existed and the softness of the enlargement. Speaking generally, the longer the disease has been present and the harder the gland the greater will be the difficulty in obtaining a satisfactory result. Under *x*-ray treatment the first improvement is in the nervousness and in the pulse rate. In the early stages of the disease, when the exophthalmos is largely due to engorgement of the blood vessels of the orbit, the exophthalmos also will disappear under treatment, but later in the disease, when the exophthalmos is due to deposition of fat in the orbit, it will not be influenced by *x*-ray treatment.—(*Am. J. Roent.*, June 18.)

A Spirochete in the Urine in Trench Fever.

Capts. A. T. Nankivell and C. E. Sundell of the British Army note that under the term "trench fever" a large number of cases of fever have been observed that have certain features in common, more especially a peculiar temperature chart and slow pulse, together with severe and persistent pains in the bones of the legs. Although, with increasing experience, gathered from the study of a large number of cases, several types of trench fever have been recognized, one outstanding feature common to many cases is the frequency with which the fever and the symptoms relapse. After an initial fever of short duration, lasting two to four days, defervescence takes place, and after an interval of varying length in different patients a further rise of temperature, with a return of the bone-pains, occurs. In some cases but one relapse takes place, in others more than one, and occasionally the illness may in this way be prolonged for several weeks. The patient may be free from discomfort in the apyrexial periods, but the severe bone-pains return with the febrile periods. In one type of case the pyrexia during the relapse is of quite short duration, the temperature returning to the normal within 24 hours of the rise. In these cases a very characteristic chart is obtained, as a single "spike" is seen at strikingly regular intervals, if the relapse occurs more than once. Such charts present a certain resemblance to the well-known charts of malaria, especially as cases may be seen where the relapse occurs with great regularity after a given number of days, varying, however, in different patients.

Prolonged observations have as yet failed to demonstrate any specific virus in the blood of these patients, although the work of McNee and his colleagues has shown that the infection is present in the blood and can be transmitted by inoculation of the blood. The fact that relapse is such a prominent clinical feature of the disease, and also the peculiar course of the fever, have suggested to many that the infective agents may possibly be of protozoal rather than of bacterial origin. Further, the tendency of trench fever to relapse presents analogies with certain spirochetal diseases, such as relapsing fever and Weil's disease; and in the latter malady spirochætes can be detected in the urine at a certain period of the disease. Several observers have succeeded in obtaining evidence of the presence of spirochætes in the urine of cases of trench fever, and Captains Nankivell and Sundell in their communication deal with this side of the problem. In Weil's disease the microscopic evidence of the presence of pathogenic spirochætes can be controlled by experimental inoculation into animals. In the case of trench fever this method of control has so far not been possible, as the disease has not yet been successfully transmitted to animals by any inoculation of blood, urine, etc.

The demonstration of spirochætes in the urine of cases of trench fever cannot, therefore, be regarded as proving that trench fever is of spirochætal origin; but evidence of value in this direction would be obtained by proof that these spirochætes are only found in cases of trench fever, and more especially at a certain stage of the fever.—(*Lancet*, Nov., 1917.)

America's most valuable crop is babies.